Welcome from the President

Welcome to Northwest Florida State College! We are honored that you have chosen our college to further your education. At NWF State College, our mission is YOU! We are committed to helping all students who come through our doors to achieve their individual goals for education and career success.

NWF State College provides the advantages of affordability, excellence, and access locally. In addition to offering affordable tuition, our college consistently achieves national rankings for excellence in academics, athletics and arts. Our mission is to improve your life by providing you access to a full college experience that blends academic and co-curricular interests in a flexible, convenient, and customized schedule. We are excited about the potential, the possibilities, and the promise that exists for our students and the region of Northwest Florida.

Most importantly, we are excited that you've chosen our great college to further your education and reach your career goals!

Again, thank you for choosing Northwest Florida State College!

Dr. Devin Stephenson, President

Northwest Florida State College

College Campuses and Centers

South Walton Center | Fort Walton Beach Campus | Robert L. F. Sikes Education Center

Campus Maps

See the Campus Maps page on our website for more information.

College Locations

Niceville Campus	(850) 678-5111	100 College Blvd. East, Niceville, FL 32578
Fort Walton Beach Campus	(850) 863-6500	1170 Martin Luther King Jr. Blvd., Fort Walton Beach, FL 32547
Chautauqua Center, DeFuniak Springs	(850) 200-4100 or (850) 892-8100	908 U.S. Highway 90 West, DeFuniak Springs, FL 32433
Robert L. F. Sikes Education Center, Crestview	(850) 200-4141 or (850)	

	689-7911	805 E. James Lee Blvd., (U.S. Hwy. 90), Crestview, FL 32539
Hurlburt Field Education Center	(850) 200-4190 or (850) 884-6296	Education Services Building 90220, 221 Lukasik Avenue, Hurlburt Field, FL 32544
South Walton Center	(850) 200-4160 or (850) 267-2888	109 Greenway Trail (off Hwy. 331 South), Santa Rosa Beach, FL 32459

Academic Calendar

- **Fall Semester 2018**
- **Spring Semester 2019**
- **Summer Semester 2019**

Fall Semester 2018 (201910)

Registration - Current Students	Apr 2
Registration - Open Enrollment (New and Readmitted)	Apr 6
Financial aid (FAFSA) priority[1] deadline	May 15
Financial Aid disbursement date	Sep 24
VA deferment date	Oct 19
Tuition Payment Plan (NelNet) Enrollment Period	Jul 5 - Aug 16
Tuition Payment Deadlines (Due by 6AM[2])	Aug 2, Aug 15, Aug 22, Aug 28
Financial Aid Book Sales at College Store	Jul 23 - Aug 31
Admissions priority[1] deadline	Aug 1
Deadline to submit documentation to qualify for in-state residency	Aug 20

	Session 1 (Full Term)	**Session 2 (Term A)**	**Session 3 (Term B)**
First Day of Classes	**Aug 20**	**Aug 20**	**Oct 17**
Schedule Adjustment[3] (Drop/Add) Period	Aug 20 - Aug 27	Aug 20 - Aug 27	Oct 17 - Oct 24
Midterm grades posted[4]	Oct 16		
Last Day to Withdraw or Change to Audit	Nov 1	Sep 25	Nov 23
Last Day of Classes	**Dec 10**	**Oct 15**	**Dec 14**

Distance Learning Final Exams	Dec 8		
Final Exams	Dec 11 - Dec 14	Last Day of Classes	Last Day of Classes
Last Day of Term for Students	Dec 14	Oct 15	Dec 14
Final grades posted[4]	Dec 17	Oct 16	Dec 17

Holidays (College Closed) - Fall 2018	Sep 3	Labor Day
	Nov 12	Veterans' Day
	Nov 21-25	Thanksgiving Break
	Dec 19 - Jan 1	Winter Holiday Break

Faculty return to campus	Aug 15		
Last day of term for Faculty	Dec 17	Oct 16	Dec 17

Spring Semester 2019 (201920)

Registration - Current Students	Nov 5
Registration - Open Enrollment (New and Readmitted)	Nov 13
Financial aid (FAFSA) priority[1] deadline	Oct 1
Financial Aid disbursement date	Feb 18
VA deferment date	Mar 11
Tuition Payment Plan (NelNet) Enrollment Period	Nov 5 - Jan 4
Tuition Payment Deadlines (Due by 6AM[2])	Dec 12, Jan 3, Jan 10, Jan 17
Financial Aid Book Sales at College Store	Dec 10 - Jan 18
Admissions priority[1] deadline	Nov 30

Deadline to submit documentation to qualify for in-state residency		Jan 9	

	Session 1 (Full Term)	Session 2 (Term A)	Session 3 (Term B)
First Day of Classes	**Jan 9**	**Jan 9**	**Mar 7**
Schedule Adjustment[3] (Drop/Add) Period	Jan 9 - Jan 16	Jan 9 - Jan 16	Mar 7 - Mar 14
Midterm grades posted[4]	Mar 6		
Last Day to Withdraw or Change to Audit	Mar 27	Feb 13	Apr 15
Last Day of Classes	**May 2**	**Mar 5**	**May 8**
Distance Learning Final Exams	Apr 27		
Final Exams	May 3 - 8	Last Day of Classes	Last Day of Classes
Commencement	May 4		
Last Day of Term for Students	May 8	Mar 5	May 8
Final grades posted[4]	May 9	Mar 6	May 9

Holidays (College Closed) - Spring 2019	Jan 21	Martin Luther King Jr. Day
	Mar 18-24	Spring Break
NWF Staff return to campus	Jan 2	
Faculty return to campus	Jan 8	
Last day of term for Faculty	May 9	Mar 6	May 9

Summer Semester 2019 (201930)

Registration - Current Students	Apr 1

Registration - Open Enrollment (New and Readmitted)	Apr 8
Financial aid (FAFSA) priority[1] deadline	Feb 1
Financial Aid disbursement date	Jun 24
VA deferment date	Jul 15
Tuition Payment Plan (NelNet) Enrollment Period	Apr 1 - May 10
Tuition Payment Deadlines (Due by 6AM[2])	May 2, May 9, May 16, May 23
Financial Aid Book Sales at College Store	Apr 22 - May 24
Admissions priority[1] deadline	Apr 15
Deadline to submit documentation to qualify for in-state residency	May 15

	Session 1	**Session 2**	**Session 3**	**Session 4**
	(Full Term)	**(Term A)**	**(Term B)**	**(Term C)**
First Day of Classes	**May 15**	**May 15**	**Jun 27**	**Jun 13**
Schedule Adjustment[3] (Drop/Add) Period	May 15 - May 22	May 15 - May 22	Jun 27 - Jul 5	Jun 13 - Jun 20
Last Day to Withdraw or Change to Audit	Jul 10	Jun 11	Jul 24	Jul 19
Last Day of Classes	**Aug 8**	**Jun 25**	**Aug 8**	**Aug 8**
Distance Learning Final Exams	Aug 3			
Final Exams	Last Day of Classes	Last Day of Classes	Last Day of Classes	Last Day of Classes
Last Day of Term for Students	Aug 8	Jun 25	Aug 8	Aug 8

Final grades posted[4]	Aug 9	Jun 26	Aug 9	Aug 9

Holidays (College Closed) - Summer 2019	May 27	Memorial Day
	Jul 4	Independence Day

Last day of term for Faculty	Aug 9	Jun 26	Aug 9	Aug 9

[1]Meeting priority deadlines ensures paperwork is processed prior to first day of class; applications are still accepted after the priority deadline and processed in order of receipt.

[2]Students may pay fees in RaiderNet by clicking on the "Pay Fees" tab.

[3]A $25 fee applies to students who are registering for the first time during the schedule adjustment period.

[4]Preferably, faculty will submit course grades within 24 hours of each final exam. All grades are required to the Registrar by 11 am on the day final grades are posted.

Approved by Board of Trustees Feb. 2018

Contact NWF State College

- Academic Advising
- Academic Departmental Offices
- Admissions, Enrollment, Records
- Adult Education and Literacy
- Business Office
- Campuses and Centers Locations
- Information
- NWF State College by Web
- NWF State College by Email

NWF State College by Web

NWFSC	**www.nwfsc.edu**
Athletics	http://nwfraiders.com
Distance Learning	http://ecampus.nwfsc.edu/
Financial Aid	http://www.nwfsc.edu/FinancialAid/
Veteran's Affairs	http://www.nwfsc.edu/Students/PayingforCollege/FinancialAid/veterans.cfm

NWF State College by Email

IT Helpdesk	**ITHelpdesk@nwfsc.edu**
Admissions	admissions@nwfsc.edu
Academic Advising	advising@nwfsc.edu
Enrollment	registrar@nwfsc.edu
Fee Payment	businessoffice@nwfsc.edu
Financial Aid	financialaid@nwfsc.edu

Academic Advising

Chautauqua Center, DeFuniak Springs	(850) 892-8100
Fort Walton Beach Campus Bldg. 4, Room 403A	(850) 863-6508
Hurlburt Field Center	(850) 200-4190
Niceville Campus, Student Services Center	(850) 729-5234
Robert L. F. Sikes Education Center, Crestview	(850) 689-7911

South Walton Center	(850) 200-4160
RaiderNet degree audits	RaiderNet
AA transfer evaluation	Florida Shines

Admissions, Enrollment, Records and Information

Chautauqua Center, DeFuniak Springs	(850) 892-8100
Fort Walton Beach Campus, Bldg. 1	(850) 863-6504
Hurlburt Field Center	(850) 200-4190
Niceville Campus, Student Services Center	(850) 729-4901
Niceville Campus Fax	(850) 729-5323
Robert L. F. Sikes Education Center, Crestview	(850) 689-7911
South Walton Center	(850) 200-4160
RaiderNet, enrollment and transcripts	RaiderNet
Online admissions	Online Admission Application

Adult Education and Literacy

ABE, GED and English for Speakers of Other Languages (ESOL):

Niceville Campus, Student Services Center	(850) 729-5387
Chautauqua Center, DeFuniak Springs	(850) 892-8100
Fort Walton Beach Campus, Bldg. 3, Room 305	(850) 863-6534

Business Office - Fee Payment

Chautauqua Center, DeFuniak Springs	(850) 892-8100
Fort Walton Beach Campus, Bldg. 1	(850) 863-6504
Hurlburt Field Center	(850) 200-4190
Niceville Campus, Student Services Center	(850) 729-5385
Robert L. F. Sikes Education Center, Crestview	(850) 689-7911
South Walton Center	(850) 200-4160
RaiderNet fee payment	RaiderNet

Academic Departmental Offices

Advanced Technology and Design	(850) 729-5218
Athletics, Health, and Fitness	(850) 729-5379
BAS/Business	(850) 729-5369
Medical Coding	(850) 729-5369
Child Development	(850) 729-6081
Computer Science	(850) 729-5369
Education	(850) 729-6440
English/Communications	(850) 729-5390
Health Sciences	
Dental Assisting	(850) 729-6444
Nursing: AS	(850) 729-6400
Nursing: RN to BSN	(850) 729-6444
Radiography	(850) 729-6444
Humanities, Fine & Performing Arts	(850) 729-5382
Mathematics	(850) 729-5377
Military Science (ROTC)	(850) 729-6022
Public Safety	(850) 729-5378
Emergency Services (EMS)	(850) 729-4924
Emergency Medical Technician (EMT)	(850) 729-4924
Health Services Management	(850) 729-6444
Law Enforcement and Corrections Academies	(850) 729-5378
Paramedic	(850) 729-4924
Sciences	(850) 729-5376
Social Sciences	(850) 729-5391

Where To Go For Assistance A to Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Academic Success Center
Niceville Campus, Activities Center, Bldg. 410, (850) 729-5389 or (850) 729-5330
Chautauqua Center, DeFuniak Springs, Room 217, (850) 200-4118
Web - http://www.nwfsc.edu/Academics/AcademicSupport/FreeTutoring.cfm

Accessibility and Disability Support Services
Americans with Disability Act (ADA) Coordinators
Students: Disability Support Services
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-6079
Web - http://www.nwfsc.edu/Students/StudentAffairs/Disability/

Employees and General Public
Director of Human Resources and Equity Coordinator, Niceville Campus, Administration Bldg. 320, (850) 729-5365
Web - http://www.nwfsc.edu/AboutNWF/HR/EqualOpportunity.cfm

Academic Advising
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-5234
Web - http://www.nwfsc.edu/Students/Advising/

Admissions
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-4901
Web - http://www.nwfsc.edu/Students/Enrollment/Admissions/

Adult Education and Literacy
Adult Basic Education, GED, English for Speakers of Other Languages (ESOL)
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-5387
Web - http://www.nwfsc.edu/Academics/Departments/AdultEd/

Alumni Association
Niceville Campus, Administration Bldg. 320, (850) 729-5357
Web - http://www.nwfscfoundation.org/Alumni/Association.cfm

AmeriCorps/Service Learning: NWF Environmental Stewards,
South Walton Center, (850) 729-6037
Web - http://www.nwfsc.edu/Community/Americorps/

Athletics
Director of Athletics
Niceville Campus, Bldg. 200, (850) 729-5379
Web - http://www.nwfraiders.com/landing/index

B

Baccalaureate Programs
BAS – Bachelor of Applied Science Programs, Niceville Campus, Bldg. 360, Room 121, (850) 729-4900
BSE – Bachelor of Science Teacher Education Programs, Niceville Campus, Bldg. 520, Room 140, (850) 729-6440
BSE – Bachelor of Science Early Childhood Education, Niceville Campus, Bldg. 520, Room 140, (850) 729-6440
BSN – Bachelor of Science in Nursing, Niceville Campus, Bldg. 420, (850) 729-6444
Web - www.nwfsc.edu/Bachelor

Books & Classroom Supplies
Barnes and Noble College Store
Fort Walton Beach Campus, Bldg. 2, (850) 863-6511
Niceville Campus, Activities Center, Bldg. 410, (850) 729-5384
Web - http://nwfsc.bncollege.com

C
Campus Security
"9-1-1" At any location, 911 or "9+911"
Niceville Campus Security, (850) 582-9119 or 911
Fort Walton Beach Campus Security, (850) 863-6537 or 911
Crestview Center, (850) 826-1895 or 911
Chautauqua Center, DeFuniak Springs, 911
Hurlburt (night monitor), (850) 200-4190 or 911
South Walton Center, 911

Career Center
Niceville Campus, Activities Center, Bldg. 410, Room 129, (850) 729-5227
Chautauqua Center/DeFuniak Springs, Bldg. 2, Room 204, (850) 200-4113
Web - http://www.nwfsc.edu/Students/StudentAffairs/CareerServices/

Child Care
Mary Lou O' Connor Child Development and Education Center
Niceville Campus, Bldg. 530, (850) 729-5386
Web - http://www.nwfsc.edu/Academics/Departments/Education/EarlyChildEd/childdevedcenter.cfm

Clubs
Student Life
Niceville Campus, Activities Center, Bldg. 410, (850) 729-5348
Web - http://www.nwfsc.edu/Students/StudentLife/

Collegiate High School
Niceville Campus, Bldg. 340, (850) 729-4949
Web - www.nwfcollegiatehigh.org

Computer and Learning Labs
Web - http://www.nwfsc.edu/Academics/AcademicSupport/OpenCompLabs.cfm

Chautauqua Center, DeFuniak Springs

- Skills Lab, Room 202, (850) 892-8100

Fort Walton Beach Campus

- Computer Lab, Bldg. 7, Room 752, (850) 863-6530
- English Tutor, Bldg. 7, Room 752, (850) 729-5389
- Math Lab, Bldg. 7, Room 702, (850) 863-6520

Niceville Campus

- Academic Success Center, Activities Center, Bldg. 410, (850) 729-5389 or (850) 729-5330
  Web - http://www.nwfsc.edu/Academics/AcademicSupport/ASC.cfm
- Advanced Technical & Design Labs, Bldg. 310, (850) 729-5216
  - CAD Labs, Rooms 100 & 107
  - CISCO Lab, Room 105
  - A+ Hardware/Software, Room 114
  - Microsoft Labs, Rooms 103 & 110

- Math Lab, Bldg. 300, Room 131, (850) 729-5377
- Science Lab, Bldg. 350, Room 118, (850) 729-5376

Robert L. F. Sikes Education Center, Crestview

- Computer Lab, Rooms 109 & 303, (850) 729-5346 or (850) 689-7911

South Walton Center

- Computer Lab, Room 123, (850) 200-4160

Continuing Education (Kids on Campus and PRIME Time)
Continuing Education, Niceville Campus, Student Services Center, Bldg. 400, (850) 729-6085
Web - http://www.nwfsc.edu/Community/ContEd/PersonalEnrichment.cfm

Costa Leadership Institute
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-6880
Web - http://www.nwfsc.edu/Community/ContEd/LI/

Criminal Justice Training Center
Public Safety Division, Niceville Campus, Bldg. 510, (850) 729-5378
Web - http://www.nwfsc.edu/Academics/Departments/PublicSafety/CriminalJusticeTrainingCenter/

D
Dual Enrollment
Niceville Campus, Dual Enrollment, Student Services Center, Bldg. 400, (850) 729-5205
Web - http://www.nwfsc.edu/Students/Enrollment/Admissions/Dual/

E
eCampus/Distance Learning
Niceville Campus, Bldg. 430, (850) 729-6464
Web - eCampus.nwfsc.edu

Email: Students, Faculty and Staff
IT Help Desk (850) 729-5396
Web IT Help Desk - helpdesk@nwfsc.edu

Enrollment
Niceville Campus, Student Services Center, Bldg. 400 (850) 729-4901
Web - RaiderNet

F
Financial Aid
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-5370
Web - http://www.nwfsc.edu/Students/PayingforCollege/FinancialAid/

Foundation
Niceville Campus, Administration Bldg. 320, (850) 729-5357
Web - http://www.nwfscfoundation.org/

H
Health Sciences Programs
Web - http://www.nwfsc.edu/Academics/Departments/HealthSciences/

- Dental Assisting, Niceville Campus, Bldg. 420, (850) 729-6444
- Nursing (ASN), Niceville Campus, Bldg. 420, (850) 729-6400
- Nursing (BSN), Niceville Campus, Bldg. 420, (850) 729-6444
- Radiography, Niceville Campus, Bldg. 420, (850) 729-6444

I

International Student Affairs
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-5319

IT Helpdesk
Niceville Campus, Bldg. 430, (850) 729-5396, helpdesk@nwfsc.edu

L

Libraries (Learning Resources Centers)
Niceville Campus, Building 500, (850) 729-5318
Fort Walton Beach Campus, Building 8, (850) 863-6578
Web - lrc.nwfsc.edu
Ask-a-Librarian - lrc.nwfsc.edu/askalibrarian.cfm

Lost & Found
Niceville Campus, Student Life, Activities Center, Bldg. 410 (850) 729-5348
Fort Walton Beach Campus, Bldg. 2 (850) 863-6504
Chautauqua Center, DeFuniak Springs, Building 1, Room 140, (850) 892-8100

O

Ombudsman
Student Life
Niceville Campus, Activities Center, Bldg. 410 (850) 729-5277
Email - ombudsman@nwfsc.edu

P

Parking Permits
Niceville Campus, Student Life, Activities Center, Bldg 410 (850) 729-5348
Chautauqua Center, DeFuniak Springs, Building 1, Room 140, (850) 892-8100
Other campuses and centers see General Information
Web - http://www.nwfsc.edu/Students/StudentLife/RaiderCardParking.cfm

Public Relations & Marketing
Office of Marketing/Public Relations,
Niceville Campus, Bldg. 320, (850) 729-5362

R

RaiderCard
Student Life, Niceville Campus, Activities Center, Bldg. 410 (850) 729-5348
Fort Walton Beach Campus, Bldg. 1, (850) 863-6504
Chautauqua Center, DeFuniak Springs, Building 1, Room 140, (850) 892-8100
Web - http://www.nwfsc.edu/Students/StudentLife/RaiderCardParking.cfm

Reserving College Facilities
Niceville Campus, Student Services Center, Bldg. 400 (850) 729-5366

S

Scholarships
Financial Aid Office
Niceville Campus, Student Services Center, Bldg. 400 (850) 729-5370
Foundation, Niceville Campus, Bldg. 320 (850) 729-5357
Financial Aid Web - www.nwfsc.edu/financialaid
Foundation Web - http://www.nwfscfoundation.org/DonorsWaystoGive/GiftOptions.cfm#scholar

Student Grievances/Harassment
Dean of Students, Niceville Campus, Student Services Center, Bldg. 400 (850) 729-5379

Student Records
Niceville Campus, Student Services Center, Bldg. 400 (850) 729-4901

Student Work
Career Center, Niceville Campus, Activities Center - Bldg. 410, Room 129 (850) 729-5227
Financial Aid, Niceville Campus, Student Services Center, Bldg. 400 (850) 729-5370

T
Telephone Device for the Deaf (TDD) #'s:
Voice, 711 or 1-800-955-8770
TDD, 711 or 1-800-955-8771

Technical/Professional Education
Advanced Technology and Design Department
Niceville Campus, Bldg. 310, (850) 729-5218
Web - http://www.nwfsc.edu/Academics/Departments/AdvTechDesign/

Testing
Testing Center, Niceville Campus, Student Services Center, Bldg 400, (850) 729-6016
Other campuses and centers see General Information
Web - http://www.nwfsc.edu/Students/Enrollment/TestingCenter/

Tours
College Life & Campus Tours, Bldg. Student Services Center, Bldg 400, (850) 729-6922

Tutoring
Web - http://www.nwfsc.edu/Academics/AcademicSupport/MathLabs.cfm

Niceville Campus

- Niceville Campus, Activities Center, Bldg 410, (850) 729-5389 or (850) 729-5330
- Free Math tutoring, Math Lab, Bldg. 300, Room 131, (850) 729-5377

Chautauqua Center, DeFuniak Springs, Room 217, (850) 729-5389

Fort Walton Beach Campus, Free Math tutoring, Math Lab, Bldg. 7, Room 702, (850) 863-6520

Transcripts
Niceville Campus, Student Services Center, Bldg. 400, (850) 729-4901
Unofficial - Raidernet
Request Official Transcripts: - RaiderNet
Transcript requests may also be submitted at all college locations.

Transient Students
Niceville Campus, Admissions, Student Services Center, Bldg. 400, (850) 729-4901
Web (for FL public institutions) - http://www.floridashines.org
Transient student forms may be obtained and submitted at all college locations.

V
Veteran's Affairs
Niceville Campus, Financial Aid, Student Services Center, Bldg. 400 (850) 729-5375
Web - http://www.nwfsc.edu/Students/PayingforCollege/FinancialAid/veterans.cfm

Paying for College

Full payment of tuition and fees is required when registering for classes at NWF State College. Payment due dates are printed on the student's registration receipt and on RaiderNet. Payment may be made using cash, check, e-check, MasterCard, Visa, American Express, or Discover credit cards. Students who have not paid their fees will not be admitted to classes and will be dropped from their classes on their payment due date. The College may grant deferments as specifically defined by Florida Statutes.

Fees

These fees are subject to change by the Florida Legislature and the Board of Trustees based on the June 2017 Board Meeting. Current fees are available from the College Business Office and are published in the class schedule. These fees apply whenever applicable, except: (1) for courses in which complimentary instructional services or equivalent program costs are provided by appropriate persons, agencies or organizations; or (2) when specifically waived by the Board of Trustees. Active Duty Military and their dependents pay only Florida Resident, in-state fees, see the residency portion of the catalog. The fees listed below are for the 2015-2016 academic year.

Fees Subject to Change by Action of the Florida Legislature and the NWF State College *Board of Trustees without notice.*

	Instate Tuition per credit hour	Border State (Alabama) Tuition per credit hour	Out-of-State Tuition per credit hour
Baccalaureate (College Credit)	$122.59	$123.59	$450.86
Advanced & Professional (College Credit)	$104.01	$105.01	398.02
Postsecondary Voc. (College Credit)	$104.01	$105.01	398.02
Developmental	$104.01	$105.01	398.02
Postsecondary Adult Vocational (Voc. Credit)	$86.10	$87.10	344.10
Adult Basic & Adult Secondary	$30.00	$30.00	30.00

Laboratory and Special Tuition Fees exist to cover unique costs related to a given course. The amount is determined course-by-course and is based on the instructional costs for each. A fee schedule is on file in the Business Office and is printed in the class schedule each session.

Full Cost of Instruction for Third Attempt

College credit and developmental course enrollments beginning with the third attempt in the same course pay the full cost of instruction (based on action by the Florida Legislature).

RaiderCards

The RaiderCard is a student identification card that is issued to college credit students after tuition fees are paid. There is a $15 fee per term.

The RaiderCard allows students to deposit money on the card to be used on campus for photocopying and food services and bookstore purchases. It is also used to provide access at the College Learning Resource center and to provide free admission to NWF State College athletic events and certain cultural events offered by the college. RaiderCards are re-activated each time a student re-enrolls. Lost or damaged cards may be replaced for a $15 charge.

Other Fees and Charges

Continuing Workforce Education	At Full Cost of Instruction
Distance Learning Fee	$15.00 per credit hour
Hybrid Learning Fee	$9.00 per credit hour
Graduation Application Fee	$25.00 per term, for degrees only (BAS, BS, AA, AAS, AS)
Late Registration Fee (during Schedule Adjustment Period)	$25.00 per term
Library Fines	
Late fee	$0.20 per day
Lost Book Charge	Actual cost of replacement (if available) or $25.00 plus $5.00 processing fee
Parking Decal Fee	$25.00 per term or $60 annually (available to purchase during fall term only)
Recreational & Leisure Courses	At Full Cost of Instruction
Reinstatement Fee*	$25.00
Returned Check Fee*	$25.00
Special Service Charges	At Cost
Student Access Fee**	
Per semester fee	$15.00
Replacement fee	$15.00
Transcript Fee (per transcript)	$10.00 electronic or $15.00 paper

*Students who are administratively withdrawn from class due to late payment or non-payment of fees, loans or deferments or a dishonored check will be charged a $25.00 reinstatement fee.

** Student Access Fee is required of all college credit students.

Course Fees

In accordance with Florida Statute 1009.23 (12)(a), course and lab fees are adjusted each year upon board approval. These fees cover expenses unique to course offerings such as laboratory fees, standardized testing fees, and other direct course level expenditures. To view course and lab fees, visit NWF Class Search.

Testing Fees*Online Payments

Credit card payments are not accepted in person at any of our campuses or centers. Online credit card payments through CashNet SmartPay will have an added convenience fee of 2.75%. Online E-check payments can be made at no extra charge.

Admission Assessment Exam for Health Programs (HESI)	
Required of Radiography and RN Students	$40.00
College Level Exam Program (CLEP)	
Exam Fee $80.00/Administration Fee $20.00	$100.00
Course Challenge Exam	$100.00
DSST Exams (formerly DANTES)	
Exam Fee $80.00/Administration Fee $20.00	$100.00
FBAT Test	$35.00
GED Test	
Complete Battery	$128.00
Individual Modules	$32.00
PERT	
Non-NWF State College students or repeat attempts by NWFSC students (There is no charge for the first attempt for students enrolling at NWF State College.)	$10.00
Proctoring (Other Schools)	$30.00
TABE (Non-NWF State College Students)	$20.00
Microsoft Office Specialist Certifications (MOS)	
(Non-NWF State College Students) Exam Fee per Section	$62.80
Certiport Internet and Computing Core Certification (IC3)	
(Non-NWF State College Students) Exam Fee per Section	$22.18

* Additional registration fees may apply. See Testing Services for additional information.

Parking Fines

All students, staff and faculty must register their vehicles with the College and display the parking decal when on campus. Visitors must park in designated visitor sections or obtain a visitors temporary parking permit from the Welcome Center in the Student Services Center or Student Life in the Activities Center. Parking regulation details are in the Student Handbook section of the catalog. Violating NWF State College's parking regulations may result in parking fines being assessed, the vehicle being towed, or "booted" at the owner's expense.

No Decal Fee	$25.00
Parking Ticket	$25.00
Tire Boot Removal Fee	$25.00 plus parking ticket of $25.00
Towing and Storage	Actual cost

Fines and Debts to the College

All unpaid debts, including Federal Guaranteed Student Loans, with NWF State College will result in fines being assessed or the withholding of transcripts, diplomas, certificates, and other official documents. Students will be prohibited from enrolling until all debts are paid in full. Students may be subject to liabilities for collection costs including attorney's fees.

Cost Summary

The range of basic charges for a typical full-time college-credit tuition non-baccalaureate student, per year, registered for 15 credit hours per term for two terms are noted below. Lab fees, food, housing, and travel costs depend upon the individual student's circumstances.

Florida Resident	
Fees	$3,304.00
Books and Supplies	$1,440.00
	$4,744.00
Alabama Border-State Resident	
Fees	$3,334.00
Books and Supplies	$1,440.00
	$4,774.00
Non-Florida Resident	
Fees	$11,614.00
Books and Supplies	$1,440.00
	$13,054.00

Student Tuition Payment Plan

A student tuition payment plan is available on the college website through NelNet Tuition Installment Program. NWF State College will hold academic transcripts and refuse re-enrollment to any student who is delinquent on their agreement from any preceding semester until all amounts owed on prior agreements are paid or the student is released by NelNet. Please refer to the NWF State College website for additional information or to apply for this service.

Military Assistance

Active-duty military personnel who enroll in college-credit programs through base education offices may be eligible for financial assistance. The college has Military Assistance Agreements in effect with both Eglin Air Force Base and Hurlburt Field. Contact the base education office for details.

The Veterans Success Center, located in the Student Services Center on the Niceville campus, can assist veterans with educational goals and resources.

Refund Policy

A student can receive a full 100% refund up to and during the schedule adjustment period for the term. Full refunds after the schedule adjustment period may be requested by completing a Refund Request Form. Only the refund requests citing the following reasons will be approved: Serious illness, military orders, circumstances beyond the student's control or administrative college error. Refund requests must be submitted before the midterm and may only apply to the current semester. The Business Office will notify the student of the request disposition within 15 business days of the date of receipt of the request. Refund checks will only be issued for $1.00 or more. Refunds less than $1.00 will be paid in cash at the Business Office on the Niceville Campus.

Full financial credit will be granted for cancelled classes. Students can choose to enroll in other classes to which the fees can be applied. A refund will be processed automatically if replacement classes are not selected.

Testing Fees Refund Policy

Individuals who have paid the registration fees to take the CLEP or TABE and who are unable to test at the scheduled date and time, may request to reschedule the test or may request a full refund. The rescheduled test date must occur within thirty (30) days of the first scheduled test date. Individuals who are unable to reschedule a test may request a refund within thirty (30) days after the scheduled test date. Requests for full testing fee refunds must be submitted in writing using the Refund Request form.

Dishonored Check Policy

Checks returned by the bank will be processed as follows:

1. The student will be notified by certified mail that their check was dishonored by the bank. A $25 return check charge will be applied to the student's account.
2. The student will have seven (7) calendar days to pay for the check and the return check charge. Payment must be in the form of cash or certified funds. If any portion of the dishonored check funds includes payment of tuition and fees, failure to make the payment will result in cancellation of enrollment.
3. Reinstatement after enrollment cancellation will be considered only after full payment which will include an additional $25 reinstatement fee.

4. The student's record at NWF State College will reflect the obligation as an outstanding debt which will result in the withholding of transcripts, diplomas, certificates, and other official documents. Students will also be prohibited from enrolling until all debts are paid in full.
5. Students who have written two or more checks with insufficient funds will be subject to disciplinary action even though their checks have been paid. The college will also suspend their check writing privileges and may report to other colleges and credit reporting agencies.
6. The college will forward unpaid dishonored checks, returned check charge, and related information about the student to a collection agency within 35 days.

General Information

Mission Statement

Northwest Florida State College improves lives. We deliver outstanding educational programs that are relevant, accessible, and engaging for students of all ages and provide exceptional cultural, athletic, and economic development activities for the communities served. We commit to excellence, creativity, integrity, and services.

Values

Northwest Florida State College Values:

- Opportunity - meeting each student's educational need at his or her level of ability
- Excellence - achieving the highest standards
- Learning - acquiring new skills, insights, and ideas
- Success - preparing students for the future
- Creativity - finding innovative ways to accomplish our objectives
- Community - listening and responding to community needs
- Teamwork - supporting and respecting each other and those we serve

Vision 2020

Vision 2020 comprises the college's mission statement of seven core values that are central to all our programs and services, and an accompanying Vision outline. Vision 2020 will focus the work of the college over the coming years and be fully incorporates into all aspects of college life. Vision 2020 was prepared following several months of discussion and work within various standing committees of the college.

Vision One: A Learning-Centered Community

Northwest Florida State College will be a college that places the teaching-learning process at the core of our existence and seeks to improve student success.

- We will assess student learning, hold ourselves accountable for learning outcomes, and invest in resources to improve student learning outcomes.
- We will use learning-focused methods that actively engage students and will seek to help students understand that they are an integral part of the teaching-learning process.
- We will provide learning environments, both in and out of the classroom, that meet student learning needs and encourage student success.

Vision Two: Access to Opportunity

Northwest Florida State College will be the gateway to higher education opportunity for students in areas we serve.

- We will provide educational opportunities at multiple sites and varying times and through alternative delivery methods that maximize the opportunity to earn an education.
- We will seek efficiency and quality while maintaining an affordable tuition level.

Vision Three: Community Engagement

Northwest Florida State College will be recognized as a critical community resource and a valuable partner in advancing cultural, economic, and educational aspirations.

- We will develop partnerships with community organizations to promote educational opportunity.
- We will provide a rich inventory of cultural, athletic, life-long learning, and academic experiences that engage community members in the life of the college.
- We will offer cultural and educational opportunities to the many constituencies we serve in a deliberate effort to broaden and enrich the lives we touch.

Vision Four: Institutional Growth

Northwest Florida State College will seek to grow strategically in areas that increase our impact on the communities we serve.

- We will increase program offerings and enrollments in baccalaureate and career/technical programs.
- We will increase the proportion of students we enroll from the communities we serve.

Vision Five: Financial Stewardship

Northwest Florida State College will be financially secure and will practice wise financial stewardship.

- We will grow the College Foundation's asset base and increase its annual impact on the college.
- We will maintain sufficient financial reserves to provide security, flexibility, and institutional innovation and development.

Vision Six: A Great Place to Work

Northwest Florida State College will be one of the leading employers in our service area by offering competitive compensation packages and investments in personal and professional development programs and will place and emphasis on job security.

- We will offer a combination of salary and benefits that allows us to recruit and retain the best possible employees.
- We will invest in the personal and professional development of our workforce and provide employees with the tools they need to do their jobs well and prepare them for future career opportunities.

College History

Northwest Florida State College is part of the Florida College System, a network of 28 public state and community colleges. NWF State College offers postsecondary education opportunities to more than 17,000 students annually. Located in the coastal heart of Northwest Florida, the college has earned a reputation for educational excellence and community involvement in its 50 year history. The college operates six area campuses and centers in Niceville, Fort Walton Beach, Crestview, DeFuniak Springs, South Walton County, and Hurlburt Field.

The Florida Legislature initially established the college, originally known as Okaloosa-Walton Junior College, as the 18th of the state's eventual 28 community colleges in 1963. The institution was named Okaloosa-Walton Junior College in March 1964 and opened for students in August 1964. The college's District Board of Trustees changed the name to Okaloosa-Walton Community College (OWCC) in March 1988 to recognize the college's expanded role in economic development, cultural programs and other endeavors. Further expansion of the college's mission occurred in April 2003 when the Florida State Board of Education authorized OWCC to develop baccalaureate degree programs. In December 2003, the Commission on Colleges of the Southern Association of Colleges and Schools

approved Level II status for the college to grant baccalaureate degrees. The college name officially changed to Okaloosa-Walton College (OWC) on July 1, 2004 to reflect the college's new status to award bachelor's degrees. The college began a Bachelor of Applied Science in Project and Acquisitions Management and a Bachelor of Science in Nursing (a joint program with the University of West Florida) in the Fall 2004 semester. In 2007, the Florida Department of Education authorized the college to add baccalaureate degrees in Teacher Education and in 2008 the college's joint Bachelor of Science in Nursing program was approved as a stand-alone BSN program to become the college's third baccalaureate program.

The 2008 Florida Legislature passed the State College Bill (SB 1716) to maximize student access to baccalaureate degrees, respond to community needs for postsecondary education, and provide the degrees that best meet Florida's employment needs. The bill was signed into law by Florida Governor Charlie Crist on June 12, 2008 at a ceremony held at the Mattie Kelly Fine and Performing Arts Center on the college's Niceville Campus. In response to Okaloosa-Walton College's new role as one of Florida's first state colleges, the OWC District Board of Trustees voted on July 8, 2008 to officially rename the institution as Northwest Florida State College. While the mission of the college has expanded, NWF State College continues its long-standing commitment to open-door admissions, associate degree programs, adult education, certificate programs, and affordable tuition. NWF State College has also maintained the school's traditional scarlet and silver colors and the Raiders name for sports programs.

The college currently offers baccalaureate programs in Project Management, Management and Supervision, Nursing, Elementary Education, Middle Grades Math Education, Middle Grades General Science Education and Early Childhood Education, Birth through Four. Additional bachelor's programs may be phased in over the coming years based on regional needs and feasibility. As NWF State College fulfills its role as a state college, students benefit from the opportunity to have accessible, low cost baccalaureate degrees that meet their aspirations as students and meet the needs of higher education in Florida.

In addition to a 264 acre campus in Niceville, NWF State College operates a joint campus with the University of West Florida in Fort Walton Beach, the Chautauqua Center in DeFuniak Springs, the Robert L. F. Sikes Education Center in Crestview, the South Walton Center in Santa Rosa Beach and a full-time center at Hurlburt Field.

When its doors first opened in August of 1964 in a temporary campus of vacant buildings in Valparaiso, OWJC had a faculty of ten instructors, three support personnel and five administrators for the 309 full-time and 458 part-time students on hand. Now, approximately 102 full-time and 293 part-time instructors, as well as 455 support staff and 16 administrators serve 17,000 students annually. Since its inception, more than 302,000 persons have been served by OWJC, OWCC, OWC and NWF State College.

Located between State Roads 85 and 285, the 264 beautifully wooded acres of the college's main campus in Niceville were transferred to OWJC from the Eglin Air Force Reservation by an Act of Congress in January 1966. In 1989, another Act of Congress designated a permanent site for the 156 acre Fort Walton Beach Campus.

Throughout the college's history, NWF State College has maintained a consistent record of educational excellence. The median grade point average for NWF State College students who transfer to the State University System consistently ranks among the top five in the state. NWF State College professors have been recognized with numerous state and national level awards for instructional excellence. The college's Forensics/Debate and Brain Bowl academic teams have achieved numerous state and national championships. NWF State College students and student athletes are also consistently named to the All-Florida Academic Teams.

In addition to a record of regional and national accolades, NWF State College offers state-of-the-art student computer labs, a top-rated sports complex, a full program of intercollegiate and intramural sports, a child development center, and a criminal justice training center. The 120,000 square foot Mattie Kelly Fine and Performing Arts Center on the Niceville Campus provides students the finest in instructional facilities for dance, music, theater, the visual arts and the humanities.

Facilities

Niceville Campus

The Niceville Campus is located between State Roads 85 and 285 off of College Boulevard. The Niceville Campus includes the following permanent facilities:

- **Activities Center (Building 410)** houses the Barnes & Noble College Store, Student Life, The Academic Success Center (ASC), the Career Center, Florida's Great Northwest, as well as, a conference room for general use.
- **Administration (Building 320)** houses the executive and administrative offices, including Academic Affairs, Administrative and Financial Services, Marketing and Public Relations, the NWF State College Foundation and the Alumni Association.
- **Business and Computer Science (Building 360)** houses facilities for instructional programs in business education, business administration, computer science, mid-management and the Bachelor of Applied Science in Project Management. The building contains the offices of the college's Business and Computer Technology Divisions and offices for the Bachelor of Applied Science degree in Project Management, including faculty offices. The building also contains the William T. Neshem, Mickey and Dottie Gilmore, and Blanche and Allyn Donaldson classrooms.
- **Classroom Building (Building 330)** houses ten state-of-the-art, general-purpose classrooms.
- **Collegiate High School (Building 340)** houses the Collegiate High School offices, classrooms and labs.
- **Community Service Complex (Arena, ROTC, Emergency Operations Center, Doolittle Raiders History Exhibit) (Building 200)** a multi-purpose facility which houses the college's Division of Athletics, Health and Fitness, a 2,200 seat basketball Arena, Wellness classrooms, a Fitness Center, the Raider room, and the Col. George E. 'Bud' Day Wing of the complex, which houses the college's ROTC program. A permanent Doolittle Raiders History Exhibit is located in the lobby of the Raiders Arena to honor the WWII heroes for whom the college's athletic teams are named. The museum-quality exhibit is free of charge and open from 8:00 a.m. to 4:00 p.m. Monday to Friday and during events held in the Raiders Arena. For information on the exhibit call 729-5203. Okaloosa County's Emergency Operations Center (EOC) and 911 Call Center are also located in the complex. The entire facility is hardened to withstand 190-mph winds and the Arena may serve as a public emergency shelter.
- **Engineering Technology (Building 310)** houses drafting and design, laboratories for computer-assisted drafting (CAD) and computer-aided manufacturing (CAM), Architecture Studio for AA in Pre-Architecture, Computer Engineering Technology, IT Security, and Network Systems Technology. The building also contains the James Leslie Gibson Drafting Classroom and the college's CISCO Academy and Microsoft IT Academy.
- **English/Communications, Social Science and the Gallimore Center for Healthcare Education (Building 420)** houses the college's various healthcare education programs and a variety of other instructional programs. Located on the upper north mezzanine levels are an open computer lab, three computer labs/classrooms, and faculty offices for the Division of English/Communications and Social Sciences. The first floor level contains additional faculty offices and classrooms, as well as the main office for the Division of English/Communications and Social Sciences and the Bill and Pearl Robinson Classroom. The college's Nursing and Allied Health programs in registered nursing, radiography, and dental assisting are located in the center core of this building; named the Gallimore Center for Healthcare Education. Located within the Gallimore Center for Healthcare Education are the Fort Walton Beach Medical Center Nursing Lab, the Marjorie Cox Gray and Hugh Gray Health Technology Computer Lab, the Meagan Campbell Nursing Lab, the Twin Cities Hospital Surgical Technology Lab, the Juanita Harbaugh Nursing Classroom.
- **Information Technology (Building 430)** houses the college's Information Technology staff and the Learning Technologies Offices.
- **Learning Resources Center (Library) (Building 500)** houses a collection of more than 100,000 items. There are 90,000 books, 8,000 audiovisual items, 200 magazine and newspaper subscriptions, 200 electronic databases and websites with online full-text periodicals and over 80,000 eBooks. A statewide network provides access to the holdings of all 12 state university libraries and 28 college learning resources centers, numerous electronic databases and worldwide information sources through the Internet. The LRC also contains conference room facilities and group study space. The Graphic Design Department and Studio are located on the second floor.

- **Maintenance and the Maurice F. Mettee Engineering Plant (Building 600)** houses the air conditioning and heating equipment, the Physical Plant (maintenance and custodial).
- **Marie Snow Greene Visual Arts (Building 120)** is a unique circular building in the Mattie Kelly Fine & Performing Arts Center complex that houses instructional art programs in pottery, drawing and painting is named for arts patron Marie Snow Greene. The Dotty Blacker Gallery is located in the center rotunda of the building and the facility also contains the George S. and Frederick F. LaRoche Painting Studio.
- **Mary Lou O' Connor Child Development and Education Center (Building 530)** houses a Child Development Education Center for pre-school age children and features the Sarah Brennan Goodwin Child Development Center Playground.
- **Mathematics (Building 300)** houses offices, classrooms, and specialized laboratories for the mathematics department. The building also contains the Shirley A. Howard Classroom.
- **Mattie Kelly Fine & Performing Arts Center (Building 100)** the main building houses the Mainstage Theater, the Frances Smith Herron Dance Studio, Box Office, and offices for the Division of Humanities, Fine & Performing Arts. The smaller Sprint Theater is located adjacent to the main theater. A central circular sculpture courtyard, which features the college's signature "Seven Dancers" sculpture, connects the theater building with two instructional wings. The Music Wing contains the Tyler Recital Hall (Eva "Kay" and Don Tyler), the Dewitt and Else Hardmant Orchestra Rehearsal Hall, the Dewitt and Else Hardmant Recording Studio, and various other performing arts Instructional facilities, classrooms and musical studios. The Art Wing contains two art galleries -- the Holzhauer Gallery and McIlroy Gallery, as well as an Art History classroom. An outdoor amphitheater is located behind the main complex as is the circular Marie Snow Greene Visual Arts Building. The Seven Dancers courtyard is ringed with benches, which are named in memory or in honor of individuals including: Marvin and Nina Adams, Belinda Besse, Dr. Joseph Matthews, James H. and Mary R. Dietz, James Leslie Gibson, Terry Tislow, Sidney and Agnes Bangma, and Julie A. Massey.
- **Observatory (Building 750)** located on the northwest corner of the Niceville Campus, the Observatory houses an 18" automated reflective telescope, complete with a CCD camera and software to allow the location and recording of events in the sky, and a classroom for Astronomy classes.
- **Public Safety East and** Gymnasium (Building 510) houses a multi-purpose facility used to house indoor physical education activities and the facilities, offices, classrooms, and specialized laboratories for programs offered by the Florida Criminal Justice Training Center No. 21 and the college's Public Safety Division, including the college's EMS/EMT/Paramedic, Fire Service, and American Heart Association programs. The building also houses the NWFSC Police Department. In addition, the division also utilizes a specialized P.A.T. (Physical Agilities Test) course, located off of West McCracken Way (the campus loop road).
- **Public Safety Firing Range (Building 550)** is located behind the Mary Lou O'Connor Child Development and Education Center on the northeast corner of the Niceville Campus.
- **Public Safety West, Driving and Firefighter Training Ranges (Building 700)** are located north of the softball field and include a specialized driving pad for Public Safety motor vehicle training and motorcycle rider safety courses.
- **Robert E. Greene Jr. Science Building (Building 350)** houses classrooms and laboratory facilities for biological and chemical science programs as well as the college's Mattie M. Kelly Environmental Institute and the Carroll Richard Stegall Classroom.
- **ROTC Rappel Tower** is located north of the softball field. Access is on a select/restricted basis through the college's ROTC program.
- **ROTC Challenge Course** a military Confidence Course, located north of the Public Safety Driving pad off of West McCracken Way (the campus loop road), was designed based on a similar facility at the U.S. Army base in Fort Benning, GA. Access to the course is on a select/restricted basis through the college's ROTC program.
- **Receiving and Grounds (Building 630)** houses Central Services, Receiving, and grounds equipment and functions.
- **Teacher Education and Graphic Services (Building 520)** houses offices and classrooms for the college's Teacher Education programs including the Bachelor of Science in Education degrees and the Bachelor of

Science in Early Childhood Education, Birth through Four. The college's Graphic Services department, which serves college faculty and staff, is also located in this building.

- **Student Services Center (Building 400)** houses the Welcome Center, Admission, Registration, Financial Aid, Veteran's Affairs (VA), the Business Office (Cashier), the Testing Center, Advising, the Office of Disability Support Services, and Recruiting on the second floor. The courtyard level first floor houses food services and several multipurpose meeting spaces. The third floor houses the Costa Leadership Institute, which includes a variety of specialized meeting and conference facilities including the Janet Nadel Morell Conference room, the Charles K. and Eileen H. Arpke, and the Carr, Riggs and Ingram Conference rooms, as well as the Goetsch Gallery.
- **Sports Complex** is located on the west side of the Niceville Campus and contains field houses for men's and women's baseball and softball, two diamonds, bleachers, and a Strength Training Center.
- **Welding/Manufacturing (Buildng 560)** is located across the street from Teacher Education and Graphic Services on the northeast corner of the Niceville Campus and houses the Welding Technology and Machining programs.

Northwest Florida State College and University of West Florida Fort Walton Beach Campus

The Fort Walton Beach Campus is a joint campus which provides higher education opportunities ranging from Associate to Doctoral degree programs, as well as, non-credit and adult basic education programs. In addition, the campus houses various economic development programs including the Economic Development Council of Okaloosa County, the Technology Coast Manufacturing & Engineering Network and the Quality Institute. The campus is located on a 156-acre wooded site owned by NWF State College on Martin Luther King, Jr. Boulevard, serving about ten percent of the students enrolled in NWFSC by offering almost 200 classes each year. Fifty-one faculty memebers teach on this campus and twelve faculty members' offices are located on the FWB campus. Two fulltime advisors serve students, many of which come from other locations. The Joint Campus is a full service campus providing admissions, registration, cashiering, financial aid information, advisement, instruction and learning, tutoring and a full service public library. The campus includes the following permanent facilities:

- **Administration (1):** houses administrative offices and the business and registration offices of both institutions, a large community meeting room, and two conference rooms available for rent to outside organizations.
- **Student Affairs (2):** houses the Barnes & Noble College Store, Student Center and student government offices along with advising for the University of West Florida. The Office for the NWFSC Police Department is also located in Building 2.
- **Classroom Building (3):** houses classrooms and the adult basic education offices. This building contains the Evelyn Walters Nelson Classroom, the Crystal Beach Development Classroom, the Heapy Family/Carpet One Classroom, the Howard F. McGee/First City Bank Classroom, G.L. "Jack" Prince, Jr./First City Bank Classroom, and the Katherine C. McGee/First City Bank Classroom.
- **Classroom Building (4):** houses faculty offices, classrooms, a reading improvement laboratory, some tutoring services and the academic counseling/advising office for Northwest Florida State College.
- **Utilities and Maintenance Building (5)**: houses the air conditioning and heating equipment, central services, maintenance, and custodial/grounds functions for the campus.
- **Science Building (6):** houses science laboratory facilities for programs in earth science, biology, chemistry, and physics and mechanical engineering laboratory.
- **Computer Labs (7):** houses computer laboratories, the Math Lab, classrooms, and various Economic Development programs. The building also contains the Judge Ben Gordon Classroom.
- **Library, Fitness Center, Auditorium (8):** houses the Campus Café coffee shop, a graduate level library operated by the University of West Florida, a fitness center, and a 230 seat lecture auditorium, which is available for rent to outside organizations.

Chautauqua Center

The Chautauqua Center is located on 90 wooded acres along Highway 90 West in DeFuniak Springs, and offers a full range of college services and programs. The center houses two computer labs, a career center, small conferencing

facilities and a child care center, as well as the L.E. "Zack" and Henrietta Laird Classroom and the T.P. and Annie R. Campbell Classroom.

Robert L. F. Sikes Education Center

The Robert L. F. Sikes Education Center in Crestview is located on East James Lee Boulevard (State Highway 90 East) and offers a full range of college services and programs. The center houses two computer labs, classrooms, a student lounge and administrative/student services space, as well as the Margaret S. Gebauer Literacy Classroom.

South Walton Center

The South Walton Center is located on Greenway Trail, just off Highway 331 South in Santa Rosa Beach is a full-service center that offers college credit, adult basic education and other courses and provides placement testing, advising and program planning, registration and financial aid services. The center houses the offices of the college's Choctawhatchee Basin Alliance (CBA) and the Allyn C. Donaldson Entrepreneurial Center that is part of the college's Costa Leadership Institute at NWF State College.

Hurlburt Field Center

The Hurlburt Field Center offers college credit and noncredit programs for military and civil service personnel. Also offered are courses specifically geared toward the Community College of the Air Force (CCAF) studies and other courses designed to meet the needs of individual military units, base contractors, and individuals who are retiring from the military.

Foundation

The Northwest Florida State College Foundation, Inc. is a non-profit organization which seeks tax deductible contributions to help the college promote academic excellence through scholarships, instructional enhancements, and educational equipment acquisition.

The Foundation was established in 1988 to give individuals, organizations and businesses the opportunity to directly invest in the educational mission of the college. As an IRS 501 (c)(3) organization, donations to the Foundation are tax deductible. The Foundation has a Board of Directors comprised of business and community leaders in Okaloosa and Walton counties.

The Foundation is vitally important to the quality and diversity of higher education in our community. The foundation operates under the philosophy of building principal and using the interest to support various NWFS State College endeavors. For information, contact the Foundation Office at (850) 729-5357 or visit www.nwfscfoundation.org.

Alumni Association

The Northwest Florida State College Alumni Association's purpose is to provide our alumni -- OWJC, OWCC, OWC, and NWF State College alike -- a means to remain involved in the college. Membership in the Alumni Association is open to all graduates and to any student who has attended the College. For more information please contact the NWF State College Foundation at (850) 729-5357 or visit www.nwfsc.edu/alumni.

Mattie M. Kelly Cultural and Environmental Institute

The Mattie M. Kelly Cultural and Environmental Institute was established in 1997. The institute is a partnership of NWF State College, the NWF State College Foundation, and the Choctawhatchee Basin Alliance of NWF State College, dedicated to the cultural, environmental, historical and instructional goals set forth for the institute by the late Mattie M. Kelly of Destin. The objectives of the institute are: to conduct biology and marine science studies associated with Choctawhatchee Bay and the Gulf of Mexico; to display the cultural heritage of Northwest Florida; to

provide instruction in the Fine & Performing Arts and Environmental Sciences; to provide a location for fine arts groups and performing groups; and to provide a location for conferences and seminars offered through NWF State College. For information call (850) 729-5357 or visit http://www.mattiekellyinstitute.org/.

Choctawhatchee Basin Alliance (CBA)

The Choctawhatchee Basin Alliance (CBA) program of NWF State College is an organization committed to sustaining and providing optimum utilization of the Choctawhatchee Basin watershed. CBA provides opportunities for citizens, educators, and technical experts to promote the health of the Choctawhatchee Basin watershed. For more information on CBA visit www.basinalliance.org, follow them on Facebook and Twitter or call (850) 200-4171.

Composition of Student Body

NWF State College is a coeducational institution serving approximately 17,000 students annually. Students age 16 to 24 comprise 55 percent of the student body. Students age 25 to 34 comprise 24 percent and students 35 to 49 comprise 18 percent. Other age students comprise the remainder of the student population.

College Website

The Northwest Florida State College website is located at www.nwfsc.edu. The website provides access to College information such as admission, registration, financial aid, bookstore, student life, academic resources, instructor websites and more.

RaiderNet

RaiderNet is the student on-line information and registration system. RaiderNet provides access to update contact information, register for classes, view grades, obtain unofficial transcripts, order official transcripts, enrollment verification, degree audit, and financial aid status. RaiderNet utilizes a password. To access RaiderNet from the college's homepage, click the quick link on www.nwfsc.edu. For questions concerning access to RaiderNet, call the Help Desk at (850) 729-5396.

Student Email Accounts

Students are assigned an NWF State College student email account during the application for admission process. The student email address serves as the official method of communication to the student from the college. This email service is reserved for college business. For more information and to access student email, go to www.nwfsc.edu. Send questions concerning access to student email to helpdesk@nwfsc.edu or call (850) 729-5396.

NWF State College Alert System

Northwest Florida State College's safety Alert system enables the college to reach students with emergency information and updates through immediate, direct communications to automatic phone calls, text messages and emails issued by the college. Students who wish to receive NWF State College Alert phone and text messages by automatic notification to their personally selected contact list, must sign up for this free service through the RaiderNet system. It is the student's responsibility to maintain the accuracy of the information and to provide their preferred contact information so that they can be reached in the event of an emergency. In addition, a student may add a parent, guardian or spouse to their emergency contact list.

Solicitation/Promotions

Agencies or organizations that request permission to display, distribute, or present programs that are not within the educational mission of Northwest Florida State College must submit a request in writing at least two weeks prior to the proposed activity. This request shall contain the name of the organization, the proposed time, date, and location, and the topic of the items to be displayed or distributed. The agency or organization must complete an Events Proposal form which will be routed for review and approval to the Vice President of Administration for final approval by the College President or his designee. The college reserves the right to determine the time, place, and manner of the presentation.

Social Security Number Collection and Use

In compliance with Florida Statute 119.071(5), 229.559 and School Code 1008-396. Northwest Florida State College collects the Social Security Number for use for the College's functions, tracking responsibilities and assisting students from K-20 in post-secondary education. The College will never release your Social Security Number to unauthorized parties. To protect your identity, each student will be assigned a secure unique student identification number. Your unique student identification number is used for all educational purposes at NWF State College.

Federal legislation requires the college to collect Social Security Numbers to report to the Internal Revenue Service. A student can refuse. However, refusing to comply with Federal guidelines can result in a fee.

All Social Security Numbers are protected by federal regulations and are not released to unauthorized parties.

Copyright Policy Statement

College policy (Policy No. GP14.00) states that employees and students will comply with the U.S. Copyright Law (Title 17, U.S. Code, Section 101). Employees and students may use, perform, or reproduce copyrighted works when authorized by (1) licenses or written permission from copyright owner; (2) the fair-use guidelines (available from the Learning Resources Center); (3) the principle of fair use; (4) specific documented exemptions in the law. Copyright items include print, video, electronic data, performances, music, and computer software.

Employees and students who willfully disregard this policy or the specific provisions set forth in the college copyright manual (available in the Learning Resources Center) are subject to state and federal penalties, including civil and criminal liability, as well as college disciplinary action. The college will refuse to grant requests if fulfillment of the request might lead to a violation of the copyright law. Further information is available from the office of the director of learning resources, (850) 729-5392.

Admissions

Northwest Florida State College is an open-door institution. However, depending on the student's major/program of study, specific admission criteria must be met. Generally, a student must be able to provide documentation that he/she is at least 16 years old and no longer enrolled in a K-12 system.

Get Started

1. It's free to apply to Northwest Florida State College. Apply online at www.nwfsc.edu/admissions.
2. Request official transcripts, as applicable, which include the following: high school or GED transcript, Home Educated Affidavit, official college and/or university transcripts from all institutions attended, Military transcripts (CCAF, AARTS, SMARTS) and official score reports from CLEP, DANTES, AICE, AP, or IB. Please request official transcripts to be sent directly to: **Admissions Office: NWF State College, 100 College Boulevard, Niceville, FL 32578**
3. All First-Time Freshman are required to meet with a Student Success Navigator for academic advising prior to registering for courses. You may call (850) 729-5111 or email advising@nwfsc.edu to schedule an appointment.
4. Use your college assigned student email. Once admitted students are assigned a college student email account. **Email serves as the official method of communication to the student from the college.** Each applicant will be notified by email of their admission's status to the college.

Readmissions

Any student who has previously attended or applied to NWF State College, and who has not been in attendance within one (1) year (3 semesters) must reapply online at www.nwfsc.edu/admissions to update personal data, verify their major/program of study, and residency. If the student attended another institution in the interim, an official transcript must be submitted from that institution. The student will complete requirements for graduation under the catalog in effect at the time of re-entry.

Transfer Students

A student who has attended any college or university prior to enrolling at NWF State College is considered a transfer student. Transfer students must request that an official transcript(s) of all previous college work including their high school transcripts be sent directly to the Admissions Office. All re-enrollment forms and supporting documents must be submitted in sufficient time to permit processing and notification of admission status prior to registration. In certain instances, applicants may be conditionally admitted as provided below.

Exception to Admissions Policy

Applicants may request an exception to Admissions Policy by submitting the Request for Exception to Admissions Policy form. Requests for exception to published policy must be accompanied by all required or appropriate supporting documentation and will be reviewed by the Executive Director-Student Success Navigation on a case-by-case basis. Requests must be submitted at least (5) business days before the end of the published Add/Drop period for the desired term of entry. Decisions issues in this process are final. Multiple appeals for the same term will not be accepted. See official appeal form for further details and instructions.

Associate in Arts, Associate in Applied Science, and Associate in Science Degree Admission Requirements

An applicant for admission to the Associate in Arts, Associate in Applied Science, or Associate in Science degree programs must be a high school graduate and may be admitted with one of the following:

A. **High School Diploma**
   Florida public high school graduates must have earned a standard high school diploma. An official high school transcript with high school graduation date is required. Non-Florida public high school graduates must have earned the equivalency of a standard Florida public high school diploma.
   All other diplomas must be validated. Institutions that are not registered with a department of education from a U.S. state or U.S. territory, or that only offer an exam for diploma, are automatically denied.
B. **State Equivalency Diploma (GED)**
   Students who have received the General Education Diploma (GED) are entitled to admission to all degree programs. An official transcript of the GED results is required for admission.
C. **Home-Educated Students**
   Home-Educated students must complete an Affidavit for Home-Educated Students form verifying high school graduation. These forms may be obtained from the Admissions Office.
D. **Foreign Educated Students**
   Foreign educated students who have earned an education equivalent to a US secondary school education must use one of the agencies sanctioned by the National Association of Credential Evaluation Services, Inc. (NACES) to translate and validate their high school diploma. Students will need to have the official evaluation sent to NWF State College. For more Information please refer to the NACES website at www.naces.org.

Certificate Admission Requirements

An applicant for admission to College Credit or Vocational certificate programs may be admitted without the standard high school diploma or GED high school equivalency diploma provided the program to which the student is applying does not require the high school diploma or equivalent. However, the College will not be able to award federal financial aid unless the student meets the requirements as set forth under the AA, AAS, and AS admission criteria above. As with all programs at NWF State College, certificate students must submit official copies of high school transcripts or GED diploma and, if a transfer student, a copy of transcripts from all previously attended postsecondary institutions.

Baccalaureate Degree Admission Requirements

NWF State College is approved by the State of Florida Board of Education to offer baccalaureate degrees. All Bachelor programs are designed to provide a career ladder for those who have already completed an associate degree (or 60 transferable credits for the Bachelor's in Education degrees and BAS degrees). All Bachelor applicants must complete the NWF State College online admission and residency materials to apply to their desired program. Applicants must complete the standard Florida foreign language upper division admission requirement. If a student has not completed two years of the same foreign language in high school or six credits in college, or does not qualify for a waiver, the student may be admitted but will need to complete the foreign language requirement before completing the program.

Bachelor of Applied Science in Project Management
Bachelor of Applied Science in Management and Supervision

An applicant for admission to the Bachelor of Applied Science in Project Management or Management and Supervision degree program may be admitted with the following:

- Completion of NWF State College admission and residency materials.
- Completion of an Associate in Science (A.S.) or an Associate in Applied Science (A.A.S.) degree (with a minimum of 60 semester hours) in a professional/technical field. A.A. degree students may be asked to

complete additional credits in a professional area (e.g., accounting, computer science, general business, etc.) in lieu of the additional general education required of the A.S./A.A.S. student.
- Completion of all developmental coursework.

Bachelor of Science in Nursing

An applicant for admission to the Bachelor of Science in Nursing degree program may be admitted with the following:

- Completion of NWF State College admission and residency materials.
- Completion of an associate degree nursing program or nursing diploma prior to enrollment.
- Completion of all developmental coursework.
- Documentation of a current RN License. Recent graduates of associate degree nursing programs who have not yet obtained a RN License may apply and may be accepted on a conditional basis for one term or until clinical experiences begin. Conditional status may be removed once the student obtains a current RN License.
- Documentation of a grade point average (GPA) of 2.75 or higher in all college credit coursework and a grade of "C" or higher in all Florida Common Course Prerequisites applicable to the RN to BSN degree program. Depending on program capacity, students with less than a 2.75 GPA may be admitted on a provisional basis. However, in all cases, the student must have earned a "C" or higher in all common course prerequisites. Provisional status may be removed if the student earns a GPA of 3.0 or higher for his/her first eight upper division nursing credits at the college. Ideally, prerequisite and general education courses should be completed prior to enrolling in upper division nursing courses; however, all prerequisite and general education courses must be completed by the beginning of the senior year.

Additional pre-enrollment conditions, which include proof of immunizations, CPR verification, drug screen, and background check, must be satisfied prior to registration.

Contact the BSN Department at (850) 729-6440 for additional information.

Bachelor of Science in Elementary Education,
Bachelor of Science in Middle Grades Mathematics Education,
Bachelor of Science in Middle Grades General Science Education

An applicant for admission to the Bachelor of Science in Education degree program may be admitted with the following:

- Completion of NWF State College admission and residency materials.
- Completion of an Associate in Arts (A.A.) degree from a regionally accredited college or university, or at least 60 semester hours of postsecondary education from a regionally accredited college or university.
- Completion of all developmental coursework.
- Completion of all general education requirements and lower-division state-mandated common prerequisite with a minimum grade of "C" in the prerequisite course.
- Completion of 6 semester hours of coursework with an international or diversity focus.
- A minimum cumulative grade point average (GPA) of 2.5 on a 4.0 scale for the general education component of the undergraduate studies or have completed the requirements for a baccalaureate degree with a minimum cumulative grade point average of 2.5 on a 4.0 scale from any approved college or university.
- Passing scores on the General Knowledge Test of the Florida Teacher Certification Examination (FTCE).
- Agreement to submit to background checks by both the Florida Department of Law Enforcement (FDLE) and the Federal Bureau of Investigation (FBI).

Bachelor of Science in Early Childhood Education, Birth through Four

An applicant for the Bachelor of Science in Early Childhood Education may be admitted with the following:

- Completion of NWF State College admission and residency materials.
- Completion of state-mandated prerequisites with a minimum grade of "C".
- Completion of an associate's degree from a regionally accredited institution with a minimum of 60 transferable semester hours.
- Completion of all developmental coursework and a minimum of 18 credit hours of transferable general education credit hours.
- Completion of 6 semester hours of coursework with an international or diversity focus.
- A minimum cumulative grade point average (GPA) of 2.0 on a 4.0 scale
- Agreement to submit to fingerprinting as required by Early Childhood facilities.

Second Degree

In recognition that students seeking a second baccalaureate degree have completed a rigorous program of study at a regionally accredited or comparable international institution, some admission and graduation, requirements will be satisfied by virtue of their previous degree. These include Gordon Rule, Foreign Language Entrance Requirement, and General Education. However, this will not preclude prerequisites for the major that happen to be general education courses. NWF State College will also honor the same practice for students who have been awarded a State of Florida Associate of Arts or a baccalaureate degree from a regionally accredited or comparable international institution and are seeking an Associate in Applied Science or Associate in Science degree at NWF State College. Students should contact the appropriate department or division office for more information.

Foreign Language Requirement

University or college admission to baccalaureate programs in the State of Florida requires that students demonstrate foreign language competencies. The Florida Department of Education has identified the competencies as successful completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination. Native speakers of another language who can demonstrate proficiency by evidence of a secondary high school transcript may petition for a waiver. Students should contact their Academic Advisor for more information.

Selective Admissions Programs

Selective Admissions programs have additional admission requirements and a competitive selection process.

Dental Assisting

The Dental Assisting program is accredited by the Commission on Dental Accreditation. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or 211 East Chicago Avenue, Chicago, IL 60611. The program is a three semester Selective Admissions Career and Technical or Vocational program. Applicants must possess a high school diploma or its equivalent, as well as satisfy all other NWF State College admission criteria. Program graduates are eligible to sit for the Dental Assisting National Board examination to receive the Certified Dental Assistant (CDA) credential. Contact Dental Assisting at (850) 729-6444 for additional information.

Emergency Medical Technician (EMT)

The Emergency Medical Technician program is accredited by the Committee on Accreditation for the EMS Professions (CoAEMSP). Emergency Medical Technicians are part of the Emergency Medical Services team. EMTs are trained to provide basic life support and transportation of the sick and injured. The EMT program prepares

students to apply for the examination to become a Florida licensed and National Registry Emergency Medical Technician Basic.

The Emergency Medical Technician program is 12 credit hours long and is conducted over one (1) semester. Applicants to this program must have a high school diploma or GED and meet other applicable admission criteria (including fingerprinting, a background check and a drug screen). If the number of qualified applicants to the program exceeds the number of openings, students will be accepted using a combination of application points and a random selection process. Contact the EMS Office at (850) 729-4924 for additional information.

Firefighting

Firefighters are trained to extinguish and control fires in response to situations where property, life, or the environment is in danger. At the scene of an emergency, firefighters perform tasks assigned by their commanding officer. Depending on the situation, they may need to provide medical attention, break through debris, operate fire hoses, or enter a burning building. Firefighters are often first responders to car accidents, heart attack scenes, and other medical emergencies that do not involve fire.

The Firefighting Certificate program is one semester that consists of two classes; Fire Basic I and II. Applicants to this program must have a high school diploma or GED and meet other applicable admission criteria. If the number of qualified applicants to the program exceeds the number of openings, students will be accepted using a combination of application points and a random selection process. Contact the Firefighting Office at (850) 729-4924 for additional information.

AS/RN Nursing

This two-year Nursing program, which is fully approved by the Florida Board of Nursing, leads to an Associate in Science (A.S.) in Nursing degree. Current Florida Licensed Practical Nurses (LPNs) may complete the program in three semesters, not including summer and general education course requirements. Graduates of the Nursing program are eligible to apply for licensure by examination to become Registered Nurses (RNs). They are also prepared to continue their education and can smoothly transition into the RN to BSN program offered at NWF State College.

The Associate in Science in Nursing has a twice-a-year application/admissions process to begin nursing coursework the following Fall or Spring semester. Those who plan to apply to the program may wish to complete specified general education coursework to prepare a more competitive application. Applicants must complete a program application in addition to the college application, must meet or exceed the minimum cumulative GPA requirement, and must pass the Nursing Admission Examination in order to be considered for selection into the program. Students selected for this program must meet matriculation criteria, including fingerprinting, a criminal background check, drug screen, proof of immunization and CPR Certification, as required by clinical facilities. Interested students should review all application materials and selection criteria on the Nursing website. Contact the Nursing Department at (850) 729-6400 for additional information.

Paramedic

Paramedics are the highest trained and educated pre-hospital provider of emergency medicine. In the Paramedic program, students are provided the highest quality education to prepare to become competent leaders in the high pace work of Emergency Medical Services. The Paramedic program is three semesters beyond the Emergency Medical Technician Basic level and prepares students to apply for the Florida or National Registry Paramedic board examination. The Paramedic Certificate program is a Selective Admissions College Credit Certificate. Students admitted to this program must have a high school diploma or GED and meet other applicable admission criteria (including documentation of current Florida Emergency Medical Technician (EMT) Certification, fingerprinting, a background check and a drug screen). If the number of qualified applicants to the program exceeds the number of openings, students will be accepted using a combination of application points and a random selection process. The

curriculum for this program forms the core of the Emergency Medical Services Associate in Science degree program. Contact the EMS Office at (850) 729-4924 for additional information.

Radiography

The Radiography Program is a Selective Admissions Associate in Science degree program. New students are accepted annually for enrollment in the Summer Term. Students admitted to this program must meet specific admission criteria. Additionally, after acceptance into the Radiography program a background check, drug screen and other training will be required. Graduates of the program will be eligible to sit for the American Registry of Radiologic Technologists (ARRT) certification exam. Contact the Division of Allied Health at (850) 729-6444 or visit our website for additional application requirements and information.

Welding

The Welding Technology and Advanced Welding Technology are Selective Admissions Certificate programs. New students are accepted for Admissions annually in the Fall term for the day program and annually in the Spring term for the night program. Students admitted to this program must meet specific admission criteria. The NWF State College Welding program provides you the skills, knowledge, and customized training required to be a professional welder. Students accepted into the program have the opportunity of obtaining NCCER credentials. Each certificate level is acknowledged by the industry as proof of acquired skills in various forms of welding, cutting, base metal preparation, welding inspection, safety, and metallurgy. Interested students should review all application materials and selection criteria in the Welding program guide. Please contact the Welding Office at (850) 729-5224 for the daytime office and (850) 729-5233 for the night time office or visit the welding website for additional information.

Programs with Additional Admission Requirements

Criminal Justice Training Programs

The Law Enforcement Basic and Correctional Officer Basic Career and Technical or Vocational Certificate Programs are certified through the Florida Department of Law Enforcement (FDLE). The college is designated as Florida Criminal Justice Training Center Number 21 and students enrolling in these certificate programs must meet FDLE requirements (including fingerprinting and background check), possess a standard high school diploma or its equivalent, successfully complete the Florida Basic Abilities Test (FBAT), as well as satisfy all other NWF State College admission standards. Contact the Criminal Justice Program at criminaljustice@nwfsc.edu or (850) 729-5378 for additional information.

Emergency Medical Services

The Associate in Science in Emergency Medical Services (EMS) is limited to students who are licensed EMT/Paramedics. Contact the EMS Program Office at (850) 729-4924 for additional information.

Fine and Performing Arts

Some Fine and Performing Arts classes are open only by audition or faculty/division approval. Contact the Humanities, Fine and Performing Arts Division at (850) 729-5382 for additional information.

Reserve Officers' Training Corps (ROTC)

The U.S. Army Reserve Officers' Training Corps (ROTC) program provides an outstanding opportunity for military leadership training. Students may also begin leadership training at the college level. Participation in the program does

not require a commitment to enter the U.S. Army for non-scholarship students. The four courses in the program are transferable to any ROTC program in different branches of the military and participants in the program are able to transfer seamlessly for upper division studies.

To enroll, a student must be physically qualified, a full-time degree-seeking student and a U.S. citizen. Student may register for their ROTC courses at any NWF location but ROTC courses will be taught at University of West Florida's main campus in Pensacola. For additional information contact Ramsey Ross at (850) 729-5379.

Non-Degree Seeking Students

Many students attend college to upgrade employment skills, for transfer credit, or for personal interest and enjoyment. Non-degree applicants only need to provide a completed Application for Admission and Florida Residency form. Applicants who do not wish to earn a degree or certificate from NWF State College and wish to take college, career and technical or vocational credit courses do not need to provide evidence of prior educational coursework. However, students seeking enrollment in courses with prerequisites or other admissions requirements, or students seeking financial assistance may be required to provide evidence of all prior educational course work. Students will not be permitted to enroll in any college credit English, humanities, mathematics or Gordon Rule social science course without meeting the State of Florida mandated minimum scores on an approved placement test or showing that they have met the prerequisite or are exempt from placement testing.

Transient Students from Other Institutions

Students who are currently enrolled at another post-secondary institution, wishing to take courses that will be transferred back to their current institution are considered Transient Students. Transient Students are required to submit their home institution's authorization of course selection before registration.

Adult General Education

This program leads to the completion of elementary and secondary studies, including basic reading, writing and mathematics. Adult General Education classes are designed for adults who need to develop skills in reading, writing and arithmetic with a minimum of 4th grade level on the Test of Adult Basic Education (TABE) assessment. It includes other subjects related to gainful employment and college readiness such as obtaining the Florida High School Diploma through GED testing, career preparation and postsecondary transition services. English classes are available for students that have a primary language other than English. Eligibility requirements are as follows:

- Applicants must be 16 years old.
- Applicants normally must NOT have received a standard high school diploma or passed the General Education Development (GED) Test.
- Registration dates and start times are the same as those for college credit students. The Adult Education Program is open enrollment and students may enroll anytime during the semester. The term fee is $30.00. Most student classroom materials are included in this fee.

International Students

International students should begin the admissions process at least four months prior to the beginning of any college term. International mail delays, transcript verifications, international monetary transfers, consular appointments, travel, housing and advisement/testing requirements must be anticipated many months in advance of enrollment. The desired date for application materials to be received by the College is April 1st for Fall, September 1st for Spring and January 1st for the Summer term. International students seeking college credit on the F-1 or M-1 visa must satisfy all requirements for admission as a regular student and meet the following requirements:

1. Fill out the admission form located within the International Student Application Packet. Students can obtain an International Student Application Packet from the Admission area of the NWF State College website.
2. Transcripts: Official evaluations of secondary school records must be evaluated by an outside source at the student's expense. Students must use one of the agencies sanctioned by the National Association of Credential Evaluation Services, Inc. (NACES). For more Information please refer to the NACES website at www.naces.org. Though not required requests for the acceptance of college/vocational level transfer work must also be evaluated by a NACES sanctioned evaluation service at the student's expense. Recommendations from the evaluation service will be considered in determining what courses may transfer, however, the final determination will be made by the College Registrar in consultation with the Academic Department Chairs/Deans. Academic records will not be returned nor will they be forwarded to another college or agency.
3. Financial Support: An official statement from the applicant's (or sponsor's) bank or other financial institution or government agency verifying the availability of sufficient funds for tuition, matriculation, books, living expenses, etc., must be submitted. (Approximately: $22,000 for the academic year.) With the exception of athletic scholarships, financial assistance for international students is not available from Northwest Florida State College. An international student must be able to finance all school expenses and transportation. Before obtaining a visa, the U.S. government will require a copy of the financial certification given to Northwest Florida State College. Employment is not permitted unless permission to work is given by INS. Remember, fees are subject to change without notice.
4. Language Proficiency: Test of English as a Foreign Language (TOEFL) results are required of applicants for whom English is not the primary language. The minimum required score is 173 for the computer-based TOEFL and 61 on the Internet-based TOEFL. Students, who have evidence of English proficiency in lieu of a passing TOEFL score, may petition the Admissions Office for consideration. **NWF State College does NOT give the TOEFL test.**
5. Health Information: Health insurance with hospitalization coverage and a repatriation clause is required. This insurance should be obtained prior to the international student's first registration and must be maintained while attending NWFSC.

An official notice of acceptance or denial will be sent to applicants. Applicants should not make definite plans to arrive in the U.S. until he/she has been notified of acceptance to the college. Being in the U.S. will not affect the admission decision. Completing the application process does not guarantee acceptance to Northwest Florida State College. When all admissions documents, academic credentials, and test results are on file and meet minimum standards for the college, an acceptance letter will be sent along with the U.S. Immigration Form I-20. The Form I-20 is the document required to obtain the Student (F-1 or M-1) Visa. Final approval for visa is determined by the American Embassy or consulate representative and not the college. If the student cannot enroll for the semester written in the notice of acceptance and wishes to enroll in a different semester, International Student Admissions must be informed immediately.

NWF State College does NOT provide on campus housing; therefore, international students must arrange housing in the community. There is limited public transportation service in the area; students must provide their own transportation to and from the college. The U. S. Citizenship and Immigration Service (USCIS) regulations require that foreign students enroll in a full-time course of study during two of the yearly terms. USCIS regulations also restrict work opportunities for such students. International students should consult with the International Student Advisor and present his/her student visa and evidence of health insurance before registration.

Collegiate High School

NWF State College operates an innovative charter high school on the Niceville Campus. This school is a public school of the Okaloosa County School District governed by the NWF State College Board of Trustees. Through this unique high school/college program, students may earn both a high school diploma and a two-year college degree at the same time through full-time study at NWF State College. The Collegiate High School is free of charge and operates under guidelines established by Florida statute. Admission is open to any public, private or home school student who is of high school age and who has earned credit for placement in grades 10, 11, or 12.

Collegiate High School students enroll in honors high school classes and college courses and may earn both high school and college credit for these classes. Students follow an approved program of study designed by the student, his/her parents, and an educational advisor. The program of study meets the Florida statutory requirements for both a high school diploma and an associate degree. A limited pre-collegiate track assists students who are not completely prepared to directly enter a full program of college-level classes. For more information, call the Collegiate School Office at (850) 729-4949 or visit www.nwfcollegiatehigh.org.

Simultaneous Enrollment for High School Students

Simultaneous enrollment programs provide a means for educational acceleration for academically superior high school students. These include the following admission categories:

Dual Enrollment provides the opportunity for qualified high school students from Okaloosa and Walton counties to enroll in NWF State College courses while simultaneously enrolled in high school. Students receive both high school and college credit for these courses. Dual Enrollment students are exempt from tuition, matriculation, and laboratory fees. Public school students have books provided by the student's high school through the College's Barnes and Noble bookstore. Books must be returned by the end of the semester. Private and home school students must purchase their own college textbooks. Eligibility criteria and enrollment procedures comply with Florida law and regulations and are defined in the appropriate District Articulation Agreement. Prospective students and their parents should consult the Dual Enrollment Office at (850) 729-5205 or visit the website for the most current admission information and procedures, and a list of approved college courses.

Concurrent Enrollment provides the opportunity for qualified high school students from Okaloosa and Walton counties to enroll in NWF State College courses while simultaneously enrolled in high school. Unlike Dual Enrollment, college credits earned through concurrent enrollment do not apply to the student's high school requirements. Students concurrently enrolled pay standard college tuition, matriculation, laboratory and textbook fees.

Please note the terms and eligibility criteria of these high school enrollment programs are defined by state regulation, college policies and procedures and current articulation agreements. It may vary between Okaloosa and Walton counties, private and home school students. As such, they are subject to change.

Students must meet the admission requirements in order to enroll in either the Dual or Concurrent Enrollment programs. Student success in these programs is dependent upon both academic readiness and social maturity. Prospective students should consult the Dual Enrollment/Early College Office at (850) 729-5205 for admission information and procedures or visit the website.

Florida Residency for Tuition Purposes

Northwest Florida State College offers one of the lowest tuition rates in the state of Florida. In order to take advantage of this and receive in-state tuition, students must prove Florida Residency. The Florida Residency for Tuition Purposes policy is based upon state statutes, rules of the two higher education governing boards in Florida, and statewide guidelines developed by college and university administrators in conjunction with the Statewide Residency Committee and the Florida Department of Education.

Students are classified as Florida residents, Border State residents or as non-Florida residents for the purpose of fee assessment at the time of initial registration. Criteria for determining residency status are detailed in Florida Statutes and the administrative rules of the State Board of Education. A Florida resident for tuition purposes is a person who has (or a dependent person whose parent or legal guardian has) established and maintained legal residence in Florida for the 12 months immediately preceding the first day of classes of the term for which enrollment is requested.

Residence in Florida must be for the purpose of establishing a permanent home and not merely incident to enrollment at an institution of higher education.

To qualify as a Florida resident for tuition purposes you must be a U.S. citizen, lawful permanent resident, or certain individuals granted indefinite stay by the U.S. Citizenship and Immigration Service. Living in Florida for the express purposes of attending school does NOT constitute legal residence. Students who depend on out-of-state parents for support are presumed to be legal residents of the same state as their parents unless one parent has established legal residence in Florida for more than 12 months. Two (2) documents supporting the establishment of legal residence must be dated or issued 12 months before the first day of classes of the term for which Florida residency is sought. Supporting documents for residency classification must be submitted to the NWF Admissions Office prior to the first day of the semester in order to be considered as instate for tuition purposes. Students cannot hold out-of-state driver's licenses, vehicle registrations, etc. and be eligible for Florida residency.

Providing false residency information is a violation of Florida law and could result in disciplinary action being initiated. The college will correct the fees assessed those students who misrepresent their place of legal residence. An invoice will be issued for the increase in tuition.

Dependent

Students who are claimed on their parent's tax return as a dependent for the previous calendar year shall be considered to be dependent. In addition, a student, whether or not living with his/her parent, who is eligible to be claimed by his/her parent as a dependent under the federal income tax code shall be classified as dependent. In general, the IRS requires that a "qualifying child" or "dependent" meet six (6) tests:

1. The child must be your son, daughter, or stepchild.
2. The child must be: (a) under age 19 at end of the year; (b) under age 24 at end of the year AND a full-time student; or (c) any age if permanently disabled.
3. The child must have lived with you for more than half of the year subject to IRS exceptions.
4. The child must have NOT provided more than half of his/her own support for the year.
5. The child is NOT filing a joint return for the year (unless that joint return is filed only as a claim for refund).
6. If the child meets the rules to be a qualifying child of more than one person, you must be the person entitled to claim the child as a qualifying child.

Independent

A student who meets any one of the following criteria shall be classified as an independent student for the determination of residency for tuition purposes. Evidence that the student meets one of these criteria will be requested by the higher education institution.

1. The student is 24 years of age or older by the first day of classes of the term for which residency status is sought at a Florida institution.
2. The student is married.
3. The student has children who receive more than half of their support from the student.
4. The student has other dependents that live with and receive more than half of their support from the student.
5. The student is a veteran of the U.S. Armed Forces or is currently serving on active duty in the U.S. Armed Forces for purposes other than training.
6. Both of the student's parents are deceased or the student is or was (until age 18) a ward/dependent of the court or in foster care.
7. The student is determined an unaccompanied homeless by a school district homeless liaison, emergency shelter or transitional housing program.
8. Documentation is provided showing the student provides more than 50% of his/her support for the year.

Exceptions/Qualifications

Other persons not meeting the 12 month legal residence requirement may be classified as Florida residents for tuition purposes if they fall within one of the limited special categories authorized by the Florida Legislature [Florida Statute S.1009.21(11)]. These exceptions are listed below.

Documentation in support of these exceptions is required:

1. Active duty service members of the U.S. and active drilling members of the Florida National Guard stationed in Florida (spouse and dependent children included).
2. Active duty service members of the U.S. not stationed in Florida but whose legal state of residence is Florida (spouse and dependent children included).
3. Full-time instructional and administrative personnel employed by the State public schools system, college system, or university system (spouse and dependent children included).
4. A dependent child who has lived with an adult relative (who is not a parent or legal guardian) for at least three years.
5. Persons who were enrolled as Florida residents at a state institution of higher learning but who abandon Florida residency for less than one year.
6. Latin American/Caribbean Scholars.
7. U.S. citizens living on the Isthmus of Panama who have completed 12 consecutive months of college-level coursework at the FSU Panama Canal Branch (spouse and dependent children included).
8. Full-time employees of state-agencies or political subdivisions of the State when the student fees are paid by the agency or subdivision for the purpose of job-related law enforcement or corrections training.
9. Qualified beneficiaries under the Florida Pre-Paid Postsecondary Expense Program as provided in Florida statute.
10. A dependent child whose parents are divorced, separated, or otherwise living apart, will be considered a resident for tuition purposes if either parent is a legal resident of Florida, regardless of which parent claims the minor for tax purposes.

The law allows non-U.S. citizens such as lawful permanent residents, temporary permanent residents, asylees, parolees, and refugees who have applied for and been approved for such status and who otherwise meet the 12 month legal residence requirements, to be eligible to establish Florida residency for tuition purposes. For a list of non-immigrant categories (visa categories and INS classifications) eligible to establish Florida residency for tuition purposes contact the Registrar/Admissions Office or consult the Residency Guidelines under Apply on http://www.floridashines.org.

Reclassification

Students classified as out-of-state residents for tuition purposes, may re-apply for in-state residency at such time as they have completed the requirements for establishing legal Florida residency. Students can reclassify by submitting an updated Residency Classification form and supporting documentation to the Admissions Office. A minimum of three (3) documents that support clear and convincing evidence of Florida legal resident for the previous twelve (12) consecutive months will be required. Supporting documents for reclassification must be submitted to the NWF Admissions Office prior to the first day of the semester in order to be considered.

Students who become eligible for in-state tuition in the middle of a term shall have their record adjusted to reflect the in-state tuition rate effective the next term of enrollment. **Tuition will not be adjusted for the current term**.

Appeals

In cases where the applicant expresses a desire to appeal the residency classification the appeal will be referred to the Residency Appeal Committee in accordance with the college's official appeals process. The Residency Committee will render to the applicant the final residency determination and the reasons for the determination in writing.

Recent Florida High School Graduates Waiver

House Bill 851 amended section (s.) 1009.26, Florida Statutes (F.S.), fee waivers, to authorize an out-of-state fee waiver for students who have attended a Florida high school for 3 consecutive years immediately prior to graduating from a Florida high school. These students must have applied to Northwest Florida State College within 24 months after their high school graduation. In order to be eligible, students will need to submit an official high school transcript showing the Florida high school attendance. This waiver can be applied to recent Florida high school graduates regardless of their immigration status to include DACA and undocumented students. Students who do not qualify for in-state residency are encouraged to contact the Admissions Office to explore their options and apply for the waiver; 850-729-4901 or admissions@nwfsc.edu.

Out of State Tuition Waiver for Veterans and their Dependents

House Bill 7015 created the Congressman C.W. Bill Young Veteran Tuition Waiver Program, authorizing an out-of-state fee waiver for honorably discharged veterans and their dependents of the United States (U.S.) Armed Forces, U.S. Reserve Forces or the National Guard who physically reside in Florida. A new waiver application is required each academic year. Veterans students and their dependents are encouraged to seek in-state residency for tuition purposes through the Admissions Office.

Northwest Florida State College shall waive the out-of-state tuition for veteran students and their dependents who meet the following conditions:

- The Veteran student and/or dependent's sponsor received an honorable discharge as a member of the U.S. Armed Forces, U.S. Reserve Forces or the National Guard.
- Physically reside in the state while enrolled at the institution (this will be verified each semester).
- Proof of honorable discharge confirmed on veteran's DD214 (member copy 4).
- Proof of physical residence in the state may include but is not limited to submission of an annual lease and/or a FL Driver's License reflecting the veteran's name.

In order to be eligible for the waiver, students will need to fill out the Non-Resident Tuition Waiver for Veterans which can be found in the student portal; RaiderNet. The waiver is also available any of our six locations.

Out of State Tuition Waiver for Active Duty Service Members

House Bill 799 amended section (s.) 1009.26, Florida Statutes (F.S.), fee waivers, to authorize an out-of-state fee waiver for a person who is an active duty member of the Armed Forces of the United States residing or stationed outside of the state. Tuition and fees charged to such students will be at the in-state rate. In order to be eligible, students will be required to present a copy of their active duty orders. House Bill 799 was signed into law July 2016.

Additional Resources

Florida Statutes

- 1009.21 *Determination of Resident Status for Tuition Purposes*. This statute outlines the broad legal parameters for establishing residency for tuition purposes in Florida public higher education institutions.

State Board of Education Rules

- 6A-10.044 *Residency for Tuition Purposes.* The purpose of this rule is to establish consistent policies for the classification of students as residents for tuition purposes in accordance with criteria set forth in Section 1009.21, F.S.

- 6A-20.003 *Florida Residency as a Requirement for the Receipt of State Student Aid*. Students that attend a Florida postsecondary educational institution must show eligibility to receive funds from state student financial assistance programs by following proving Florida residency as outlined in 1009.21, F.S.

Board of Governors Residency Regulation

- State University System of Florida Board of Governors Residency Regulation.

Florida Residency Guidelines

- Articulation Coordinating Committee's Guidelines on Florida Residency for Tuition Purposes . This Residency Guidelines document was adopted by the Articulation Coordinating Committee to assist college and university administrators in implementing Section 1009.21, Florida Statutes; Rules 6A-10.044 and 6A-20.003, Florida Administrative Code; and the Board of Governors (BOG) Residency Regulation. The guidelines, as maintained by the Statewide Residency Committee, are used to determine residency status for tuition purposes in public colleges and universities. The Florida Residency Guidelines for Tuition Purposes were first adopted by the Articulation Coordinating Committee September 6, 2006

Alabama Residency

The Florida Legislature allows the option of providing Alabama residents a different tuition assessment for postsecondary classes. At NWF State College the Alabama Border State Fee, at a rate of an additional $1.00 per credit hour to the current in-state tuition rate, will be assessed for all eligible Alabama residents.

To be eligible for the Alabama Border State Fee the student must complete the Alabama Residency form and provide verification of an Alabama driver's license, Alabama vehicle registration, or Alabama voter's registration card.

Financial Aid/Veteran's Affairs

Financial assistance administered by NWF State College does not discriminate on the basis of color, religion, age, sex, national origin, disability, pregnancy, or marital status. Specific criteria and academic standing information may be required for particular assistance or scholarships.

The mission of the Office of Student Financial Aid and Veteran Affairs Office at Northwest Florida State College is to remove financial barriers; to promote the success of a diverse student body; and to increase opportunities for access in higher education. We seek to provide a premier experience for students, faculty, and staff by providing timely communication and by providing courteous and efficient financial services while complying with all federal, state, and college policies.

Financial Aid Administered by Northwest Florida State College

Federal Aid: Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (SEOG), Federal Work Study Program (FWS), and Federal Student Loans

State Aid: Bright Futures, Florida Student Assistance Grant (FSAG), First Generation Matching Grant, and Scholarships for Children and Spouses of Deceased or Disabled Veterans

Institutuional Scholarships are also awarded by NWF State College. The application can be found at: https://www.nwfsc.edu/students/financialaid/scholarships/

Steps in Applying for Financial Aid

1. Complete the NWF State College Application for Admission and Residency.
2. Request appropriate supporting documents for admission (i.e. high school transcript, GED, college transcripts).
3. Complete the Free Application for Federal Student Aid (FAFSA) at www.fafsa.ed.gov.
4. 24 hours after completing the FAFSA, the student will receive a Student Aid Report (SAR). The SAR must be reviewed by the student for accuracy.
5. Check RaiderNet after submitting the FAFSA for red flags (Federal Verification Form, federal income tax transcript, W-2 forms, SAP, etc.).
6. If a student's financial aid file is "complete", then an award letter will be emailed to the student by the college's Financial Aid Office. Awards listed on a student's award letter are tentative and are not final. Awards can be either adjusted or canceled at any time due to enrollment, academic standing or availability of funds.
7. Student loans are automatically awarded to students. You can accept or decline the full or partial amount of student loan monies on the Financial Aid tab of RaiderNet.

Timelines for Applying for Financial Aid

Applications for federal financial aid should be made well in advance of registration by submitting the Free Application for Federal Student Aid (FAFSA).

Fall Term	Spring Term	Summer Term
May 15	October 1	February 1

Students not meeting the priority timeline may still qualify for financial aid but may experience delays in receiving financial aid.

The last day for determining enrollment status (i.e. part-time, three-quarter time, or full-time) is the last day to register for full-term courses during each term. (These dates are listed on the Academic calendar.) Students must be enrolled in all classes that will be included in their enrollment status, including late starting classes, by the last day to register for full-term.

Enrollment Status

The amount of federal financial aid a student is eligible to receive is dependent on the student's enrollment status each term based on the following table. Credit hours are computed using all developmental and college credits in which the student is enrolled.

Full-Time Enrollment	Three-Quarter Time Enrollment	Half-Time Enrollment	Less Than Half-Time Enrollment
12 or more credit hours	9-11 credit hours	6-8 credit hours	1-5 credit hours
450 clock hours	Clock hours/program length*	Clock hours/program length*	Clock hours/program length*

*To determine enrollment status other than full-time, as established by federal regulation, the number of clock hours the student is enrolled in is divided by the program length.

- Enrollment status is based upon number of credit hours enrolled in at the END of schedule adjustment period each term.
- The amount of the award will not increase if students add a class after that schedule adjustment period.
- To retain enrollment status, student must attend all of their classes. Attendance for distance learning courses is defined as attending an orientation; participating in the course, as defined by the instructor; submitting course assignments, as required, to the instructor; or initiating contact with the instructor.
- Failure to attend any enrolled course will lower the award status and amount.
- Award emails are sent to notify students the disbursement amount based upon the number of enrolled credit hours.

Enrollment status will be determined by the number of credit hours or clock hours in which a student was enrolled on the date a student's eligibility is verified.

Student Eligibility

FEDERAL PROGRAMS

For a student to be eligible for federal financial aid at NWF State College, a student must:

- Be accepted for enrollment in an approved program of study, have a high school diploma or GED
- Be a U.S. citizen, or an eligible non-citizen
- Not owe a refund or repayment on a federal grant at any institution
- Not be in default on a federally-funded or insured student loan
- **Must maintain satisfactory academic progress standards**

STATE OF FLORIDA PROGRAMS

For a student to be eligible for State of Florida financial aid (i.e. FSAG, FSAG-CE) at the college, a student must:

- Have demonstrated a financial need (complete the FAFSA application)
- Have met the advertised deadline
- Have been a resident of Florida for one year or be classified as a Florida resident by the Registrar's Office
- Be degree-seeking (enrolled in an A.A., A.S., A.A.S., B.S., B.A.S., or certificate program)
- Have a 2.0 or higher grade point average (GPA) on all previous college work
- A student must have earned credit hours equivalent to his/her enrollment status during each term of the prior academic year in which state aid was received, (12 credit hours or 360 vocational hours for each term of full-time enrollment, 9 credit hours or 270 vocational hours for each term of three-quarter-time enrollment and 6 credit hours or 180 vocational hours for each term of half-time enrollment), and
- A student enrolled as a full-time student (minimum 12 credit hours or 360 vocational hours) is eligible for a full-time FSAG or FSAG-CE award. A student enrolled part-time (6 to 11 credit hours per term or 180 to 330 vocational hours) is eligible for a part-time FSAG or FSAG-CE award. Part-time awards will be prorated according to enrollment status. FSAG and FSAG-CE awards will be offered until the limited funds are exhausted.

All FAFSA applications for the Florida Student Assistance Grant (FSAG) dated May 15 or earlier will be given first priority in determining FSAG eligibility. All FAFSA applications for the Federal Work-Study Program (FWS) and the Federal Supplemental Educational Opportunity Grant (FSEOG) dated May 15 or earlier will be given first priority in determining FWS and FSEOG eligibility.

NOTE: An applicant who believes State of Florida financial aid has been wrongly denied has a right to appeal. The applicant may appeal to the Financial Aid Office if he/she believes an error has been made in determining eligibility.

Financial Aid Standards of Academic Progress

Satisfactory Academic Progress Requirements

To be eligible for financial aid, all students, including students transferring to NWF State College from another institution, must meet NWF State College's standards of satisfactory academic progress for financial aid. Student academic progress is reviewed at the end of each term. A transferring student's satisfactory progress will initially be determined from the student's academic history at all previously attended institutions. Students who attended NWF State College in the past will be reviewed based on all previously attempted courses, regardless of how long ago they attended NWF State College, in accordance with federal guidelines.

Failure to meet one or more of the established standards of satisfactory progress will make a student ineligible for financial aid. Students who become ineligible for financial aid due to the failure to meet the standards of satisfactory progress for financial aid will remain ineligible for financial aid until they meet the standards or are placed on an Academic Plan as a condition of their approved appeal. Satisfactory progress includes all previous academic history, even if the student did not receive financial aid.

Standards of Satisfactory Academic Progress for Financial Aid

Below are the standards of satisfactory progress for financial aid. These standards apply to all students:

All students must complete their degree program before attempting more than 150 % of the total credit hours required for their program.

Satisfactory Academic Progress (SAP) for Financial Aid Eligibility Federal regulations (34 CFR 668.34) require a student to move toward the completion of a degree or certificate within an eligible program when receiving financial aid. Specific requirements for academic progress for financial aid recipients are applied differently than college Academic Standards, Warning, Probation, and Suspension. Federal regulations state that Satisfactory Academic Progress Standards must include a review of all periods of enrollment, regardless of whether or not aid was received. The student must meet all the minimum standards in order to receive financial aid.

There are three parts to the SAP rules:

Your SAP status is calculated using your entire academic record from all schools attended, even if you did not receive financial aid. This includes dual-enrollment credits from high school.

1.You must maintain a 2.0 cumulative Grade Point Average (GPA). This is includes all course work you have taken at NWF State College or any college or university (this includes college level classes taken during high school), regardless of whether or not you received financial aid for those classes.

2.You must successfully complete at least 67% of all of the classes in which you have enrolled. This includes all the course work you have taken at NWF State College or any college or university (this includes dual enrollment classes), regardless of whether or not you received financial aid for those classes.

3.You must not attempt more than 150% of credits needed for the level of degree in which you are seeking. All coursework attempted is included in these totals.

Financial Aid Warning Status

The first semester a student fails to meet the satisfactory progress standards for financial aid, he/she will be placed on Warning Status. While the student will continue to receive financial aid during this period, it is the student's responsibility to restore his/her academic standing for financial aid be the end of the term in which the Warning Status is given.

Students who exceed the 150% Rule are not eligible for a Financial Aid Warning Status.

Failure to restore academic standing by the end of the Warning Status term will result in the student being ineligible for financial aid. Students can appeal their failure to meet standards of Academic Progress.

Appealing Satisfactory Academic Progress Requirements

Before submitting an appeal for financial aid, students must meet with an academic advisor and obtain an approved program of study. The program of study may be the basis for the student's academic plan. The Executive Director of Financial Planning and Scholarships may consult with the academic advisor to develop an academic plan for the student who has appealed. This academic plan becomes the core of the approved appeal. Students should file a financial aid appeal as soon as they receive notification of their failure to meet the standards of academic progress, or

no later than 30 days after the semester ends. Appeal forms and procedures are available on the Financial Aid web page at https://www.nwfsc.edu/students/financialaid/forms/

Transfer students must meet the established satisfactory progress requirements or submit a financial aid appeal. Students can appeal their failure to meet the standards of academic progress for financial aid if unusual circumstances exist. Unusual and mitigating circumstances include, but are not limited to, a death in the student's family, medical condition, hospitalization, documented emotional distress, or other situations beyond the student's control. While federal regulations make no provision for the concept of academic amnesty or academic renewal, students are allowed to appeal those courses that were considered to be old grades and thus "reset" their academic progress. The option to "reset" is at the discretion of the financial aid committee and can be used one time only.

All situations must be fully documented.

Students' appeals are reviewed by the Financial Aid Committee. Students do not meet with the committee, and the decision of the committee is final.

Courses Paid for by Financial Aid

Repeated Courses

Federal regulations limit the number of times a student may repeat a course and receive financial aid for that course.

- A student may receive aid when repeating a course that was previously failed (received a failing or unsatisfactory grade), regardless of the number of times the course was attempted and failed.
- A student may receive aid to repeat a previously passed course (grade of 'D' or higher) one additional time.
- Once a student has completed any course twice with a passing grade (grad of 'D' or higher), he/she is no longer eligible to receive aid for that course.
- This rule applies whether or not the student received aid for earlier enrollments in the course.
- Students will receive notification if they are aid applicants and attempt to repeat coursework beyond the limits.

Developmental Courses

NWF State College approves developmental courses for the use of financial aid and includes developmental courses where necessary when determining a student's enrollment status. Admission placement testing requirements will determine if developmental courses are needed in a student's degree program. Financial aid will pay for no more than 30 credit hours of developmental coursework.

Clock Hour Programs

Clock hour programs (Dental, Welding, Law Enforcement, and Fire Science/EMT) are not paid in semester hours like the other programs offered at NWF State College. Financial aid pays for the entire program, but not by semesters, and eligible amounts may be subject to proration based upon the length of the program.

Program Objective Enrollment Compliance (POEC)

Federal Financial Aid (Pell Grants, Direct Loans, Supplemental Educational Grants, college work study, etc.) will only cover courses that are part of the student's declared program.

A student's eligibility will be adjusted to reflect only those courses that are within the program of study (i.e. full-time status vs. part-time status). POEC is determined by the electronic degree audit - NOT the student's paper program of study. A student's declared program must be chosen at the beginning of the semester. Changes in declared programs will not be effective for financial aid until the subsequent semester.

Random Selection for Verification

The U. S. Department of Education randomly selects a student's Student Aid Report (SAR) for verification. Students selected must provide all the requested documents needed for this process (i.e. income tax transcripts, W-2 forms). NWF State College's Financial Aid Office retains the right to request supporting documents it deems necessary from any student to determine financial aid eligibility. For this reason, the college suggests that students do not file financial aid applications until the tax forms for the family are complete and correct. Inaccurate estimates of income and taxes paid may require extensive processing delays and verification of corrected data. All financial information reported MUST BE CORRECT. Penalties or delays may occur if the data is incorrect or incomplete. It is strongly recommended that students and parents utilize the IRS retrieval tool when completing the FAFSA.

Return of Title IV Financial Aid Funds

When a student awarded federal Title IV aid withdraws from or ceases attendance in **ALL COURSES** prior to completing more than 60% of a term, a portion of the student's Title IV aid must be returned to the federal programs. Title IV aid includes the Federal Pell Grant, Federal SEOG, Federal Direct Loans. Federal Work study aid and FSAG aid are not included. The college must determine the percentage of Title IV aid earned by the student. Up to the 60% point of the term, the percentage of earned aid is equal to the percentage of the term completed based on the day the student withdraws from or ceases attendance in **ALL COURSES**. After the 60% point of the term, the percentage of aid earned is 100%. If the student received more Title IV aid than the amount earned, the unearned amount is considered an overpayment and must be returned to the Title IV programs. NWF State College will be responsible for returning to the Title IV programs the lesser of the unearned amount of Title IV aid or the institutional charges (tuition, fees and books) incurred for the term, multiplied by the percentage of unearned aid. The student will be responsible for returning to the Title IV programs the unearned amount of aid (overpayment) minus the amount the college returns, and the amount of any unpaid institutional charges to NWF State College.

In some cases, when a student receives federal Title IV aid greater than the amount of institutional charges (tuition, fees and books), he or she will have to return a portion of the federal funds. A student will lose Title IV eligibility unless he or she returns the amount of unearned aid (overpayment) in full to the college within 45 days from the date the college notifies him/her of the overpayment, or signs a repayment agreement with the U.S. Department of Education after the 45-day period.

This policy is derived from provisions of federal law. Students receiving Title IV aid should consult with the Financial Aid Office prior to withdrawing from any or all classes.

Financial Aid Unofficial Withdrawals

Per federal regulations, schools are required to review students who received federal financial aid and failed to earn a passing grade in any of the classes. An assessment must be made to determine whether the student earned the non-passing grades while attending classes or stopped attending classes, but did not officially withdraw. Students who stopped attending classes may be required to repay a portion of their federal financial aid for that semester which will result in a debt to the college.

If a student follows NWF State College's procedures and withdraws, the student will have an official withdrawal date and their financial aid refund calculation will be completed according to NWF State College's refund policy.

At the end of each semester, all federal financial aid recipients who received no passing grades (any combination of F, FA, FN, I, W, WN) will be reviewed to determine if the non-passing grade was earned while attending or due to no

longer attending the class. Reports are generated at the end of each semester to determine the students who received no passing grades. This report is used to determine if the student completed the term and earned the "F" grade or ceased attending prior to the end of the semester. Instructors are required to indicate the last day of attendance when a grade of F is entered. The last day of attendance is then used in the calculation of the Return of Title IV Financial Aid Funds.

Veteran's Affairs Office

All new students are encouraged to visit the VAO at the Niceville campus in the Student Services Center for assistance with starting a record. NWF State College is approved for training by the State Approving Agency under the various veterans' training laws. Veterans planning to enroll and use their GI Bill should consult with the Veterans Affairs Office (VAO) well in advance of their first semester. All new veteran students should refer to the Application Procedures at the college website on our Veterans Page to establish their VA record with the VAO. VA students are also required to be familiar with the NWF State College Veteran's Handbook which explains our processes and the rules imposed by U.S. Code Title 38 and Title 10. Our Veteran's Handbook can also be downloaded from the Veteran's Page.

Training time for all programs, except Chapter 33 Post 9/11 GI Bill, is computed at full time, three quarter time and half time; please refer to your specific chapter payment chart at the GI Bill website. Chapter 33 does not have a half time rate; it is computed by dividing the student's credit hours by the full time rate, rounding to the nearest tenth and multiplying by the E-5 with dependent Basic Allowance for Housing rate. Example: 9 credit hours divided by 12 = .75, which the VA rounds up to 80%. If the BAH rate for zip code 32578 was $1,356 a BAH payment at 80% would be $1,084.80 a month. Chapter 33 students will also receive a book stipend payment which is calculated at $41.67 per credit hour. Chapter 33 students who schedule all distance learning classes, (Online, Hybrid, Independent Study, & Video Conferencing), will only receive half the national average in BAH which is $805.50 for a full time schedule.

Full-Time Enrollment	**Three-Quarter Time Enrollment**	**Half-Time Enrollment**
12 or more credit hours	9-11 credit hours	6-8 credit hours
Chapter 33:	**Chapter 33:**	**Chapter 33:**
12 or more = 100%	11 = 90% 9 or 10 = 80%	8 = 70% 7 = 60%

NWF State College also has clock hour programs that the VA calculates on a weekly basis. To maintain full time status a student must have 22 clock hours per week for Applied Welding Technologies, 18 clock hours per week for Auxiliary Law Enforcement, Corrections Officer, Law Enforcement Basic, Fire Fighter, and Dental Assisting. Chapter 33 students in a clock hour program who are full time will receive $83 a month for book stipend.

Training time for the Summer Term and any accelerated session of any term is computed differently. Veterans are advised to contact the VAO before registering for Summer Term and accelerated term classes to determine training status.

All veterans who wish to receive VA benefits must provide a signed Enrollment Certification Request Drop/Add form each semester, available on our website. VA students must submit a new Enrollment Certification Request Drop/Add form for all schedule changes, to include (drop, withdrawal, never attending, reinstatement or termination of attendance). Note: VA student attendance is reported to the VA and will affect benefit payments. A Chapter 33 student's tuition is paid directly to the college by the VA. Chapter 35, 30, 1606, and 1607 students are responsible for paying their tuition by the due date; these students, including Chapter 33 students who do not have a Certificate of Eligibility, can use a VA deferment once a school year.

Veterans' Fee Deferment Policy

Any eligible VA student who wishes to pursue an approved program of study shall be granted upon request, a deferment for full payment of fees for a period determined by the Business Office, once per school year (August through July). Under no circumstances shall any person be allowed to enroll or re-enroll at NWF State College who has an unpaid fee deferment. A student who defaults on a VA deferment will lose the right to receive future deferments.

Testing Services

- ACT/SAT Testing
- Proctor U
- Professional Testing/Certification/GED
- Registerblast
- Testing Center Hours and Contact Info
- Testing Center Locations
- Testing Services Offered and Fees

Testing Center Locations

Northwest Florida State College offers six testing locations:

- Niceville Campus
- Robert L. F. Sikes Education Center (Crestview)
- Fort Walton Beach Campus
- Hurlburt Field Site
- DeFuniak Springs Chautauqua Center
- South Walton Center.

Registerblast

If testing at the Niceville Campus, students should visit registerblast.com/nwfsc/exam to register for exams. This link is also found on the Testing Center webpage. RegisterBlast will allow test candidates to schedule and pay for exams. A $3.50 convenience fee is applied to all registrations requiring payment. For all other locations, appointments made via phone are necessary.

Proctor U

NWF State College requires that online courses include a proctored element. Students have three options for completing the proctored element: (1) face to face on the Niceville campus, (2) face to face at a remote proctoring site, or (3) online using ProctorU.

Distance Learning students are provided the opportunity to test through Proctor U. Students should log on to http://www.proctoru.com/howitworks.php to register and create an appointment. This service requires a web cam and microphone and the test candidate will be monitored through the computer screen. Tests should be scheduled at least 3 days in advance and there is an associated proctoring fee, see the Testing Center webpage for details.

Testing Services Offered and Associated Fees

PERT - For placement into English and Math courses, current and prospective NWF State College students will need to complete the Postsecondary Education Readiness Test (PERT). This assessment is free for the first attempt. Additional attempts will incur a $10.00 fee. Students must wait 7 days between each testing attempt. There is a $30.00 test fee for all non-NWF State College test candidates. The PERT test is offered at the six locations listed above.

Proctored Exams - Make-up exams for current NWF State College students are offered free of charge. Tests are offered at the six locations listed above. It is the student's responsibility to ensure the test is received at the test location.

Proctored Exams for Non-NWF State College Students - Students currently enrolled in an institution other than NWF State College will be charged a $30.00 testing fee. Tests are offered at the six locations listed above. It is the student's responsibility to ensure the testing location has received the exam from the home institution.

CLEP (College Level Examination Program) - A student may sit for a CLEP exam to prove competency in a subject area, therefore earning credit without registering for a course. It is the student's responsibility to ensure the receiving institution accepts the CLEP credit. CLEP Exams must be registered for and paid at clep.collegeboard.org. There is an $80.00 exam fee plus a $20.00 Administration Fee to be paid to the NWF State College Testing Center. This is a free exam for military and specific military affiliations. Please see the CLEP website for additional information. Test is offered at Niceville and Hurlburt Field and can only be taken once every six months.

DSST, formerly DANTES (Defense Activity for Non-Traditional Education Support) - A student may sit for the DSST to prove competency in a subject area, therefore earning credit without registering for a course. The DSST must be registered for and paid at getcollegecredit.com. There is an $80.00 exam fee plus a $20.00 Administration Fee to be paid to the testing center. This is a free exam for military and specific military affiliations. Please see DSST website for additional information. Test is offered at Niceville and Hurlburt Field and can only be taken once every six months.

FBAT (Florida Criminal Justice Basic Abilities Test) - This assessment is used to measure an applicant's likelihood of being successful in a Law Enforcement program. Aptitudes for written expression, oral comprehension, selective attention, visualization, inductive, and deductive reasoning are determined. Candidates may complete this assessment up to three times for any program in a 12-month period. The testing fee is $35.00. Test is offered at Niceville only.

HESI (Health and Environmental Sciences Institute) - The HESI is a computerized exam that includes up to seven sections. Admission into the NWF State College Associates of Science in Radiography and the Associate of Science in Nursing programs requires the completion of the Math, Reading Comprehension, Vocabulary and General Knowledge, Grammar, and Anatomy sections. Candidates are allowed two attempts during any one application cycle, with 30 days between attempts. Candidates for another institution will be required to verify the required sections of the HESI with that institution. The testing fee is $40.00. Test is offered at Niceville only.

TABE (Test of Adult Basic Education) - Students seeking admission into the Dental, Fire, and Welding programs at NWF State College are required to complete TABE and will be charged a $30.00 for for this assessment. TABE measures a combination of skills in Reading, Language, Language Mechanics, Spelling, Vocabulary, Writing, Applied Math, and Math Computation. Combinations will vary based on program admission requirements. Those completing TABE as an exit assessment will not be charged an additional fee. All other programs and test candidates will be charged $30.00 per attempt. Candidates may retake TABE immediately after first attempt. However, after two attempts, candidates must wait 30 days prior to retesting. Test is offered at Niceville only.

Professional Testing/Certification and GED Services

The Niceville Campus houses a certified Prometric and Pearson Vue testing center in which to complete professional certifications and the GED.

Prometric (Information Technology Certifications) - Designed for software and technology professionals, exams offered at NWF State College include: Microsoft Certified Systems Engineer (MCSE) and Microsoft Certified Systems Administrator (MCSA), UNIX, LINUX, A+, Network +, CISCO Certified Network Associate (CCNA), Certified Novell Administrator (CNA) and Certified Novell Engineer (CNE). For a comprehensive list, examinees should visit www.prometric.com.

Pearson VUE - Delivers certification and licensure tests through NWF State College's test center in the areas of Academic/Admissions, Construction Trades, UST & Inspectors, Driving Test, Employment/HR/Management Safety, Financial Services, GED 2014 Exam, Health/Medicine/Nursing/Pharmacy, Information Technology, Insurance, Legal Services, Real Estate/Appraisers/Mortgage and Loan, and State Regulated Certifications and Licensures. This is not a comprehensive list and examinees should visit www.pearsonvue.com.

Certiport - NWF State College offers the official Microsoft Office Specialist certification for desktop productivity in the following areas: Word, Excel, Outlook, Power Point, Access, and Project. The IC3 training and certification program covers a broad range of computing knowledge and skills that proves competency in: Computing Fundamentals, Key Applications, and Living Online. For additional information, visit www.certiport.com.

ACT/SAT Testing

The ACT and SAT are offered at the Niceville Campus on dates specified on the respective websites.

Testing Center Hours and Contact Information

Generally, testing locations are open Monday - Friday. For current testing hours, contact information or questions, go to the Testing Center webpage.

Academic Advising

- Academic Assistance
- Academic Advisors
- Excess Hours Advisory Statement
- Faculty Advisors
- Florida Virtual Campus
- Health Counseling
- NWF2UWF
- Placement Testing and Developmental Education

Academic Assistance

Northwest Florida State College utilizes a comprehensive advising model which supports students in achieving their academic goals. Academic advising and educational planning for students is offered through a variety of means and is available to assist students with course and program selection for academic program completion. All first time-in college, degree seeking students are required to meet with an Academic Advisor prior to the first semester of enrollment. Students are encouraged to schedule an appointment with an advisor at any of the six locations. At most locations walk-ins are welcome, but appointments are suggested.

Students should select their desired major at the time of application. Students who plan to transfer to a four year college or university should select an AA transfer major that corresponds to their intended bachelor's program. If assistance is needed, students are encouraged to visit the Career Center to complete career assessments to help determine an appropriate career field based on interests and aptitude.

Academic Advisors will assist with the review of transcripts for course suggestions prior to an official course evaluation being completed, guide students towards the completion of pre-requisite requirements to the desired transfer institution, and provide resources to ensure academic success.

Academic Advisors

Academic Advisors will assist students with program planning, course selection, and graduation or transfer requirements. All first time-in college, degree seeking students are required to meet with an Academic Advisor prior to the first semester of enrollment to further explore educational goals and the various programs offered by the college.

All degree-seeking students required to enroll in developmental instruction based on placement testing must meet with an advisor prior to their first semester of enrollment at the college. Students must also continue to work with an advisor throughout the duration of their developmental education courses. Student must consult with an Academic Advisor before completely withdrawing from the College.

Academic Advisors are available at the following locations:

- **Niceville Campus:**
  Student Services Center, Building 400
- **Fort Walton Beach Campus:**
  Building 44, Room 403A
- **Hurlburt Field Center:**
  Education Center, Building 90220
- **Chautauqua Center:**
  DeFuniak Springs
- **Robert L. F. Sikes Education Center:**
  Crestview
- **South Walton Center:**
  Santa Rosa Beach

Placement Testing and Developmental Education

Some students may be exempt from developmental placement testing and developmental education requirements. Advisors will utilize an advising questionnaire to determine exemption eligibility per Florida statute 1008.03 and placement options. Advisors recommend each student complete placement testing regardless of exemption status. Research shows that students not prepared for college-level course work benefit from developmental education courses that prepare them for subsequent college-level courses.

Please see the Developmental Education/Placement section of the catalog for complete information on placement in developmental education courses and developmental education exemption.

Faculty Advisors

Students who have already committed to a particular program or know the major area of study they wish to pursue may receive guidance in that discipline through the appropriate academic department.

Advanced Technology & Design

Drafting/Graphics/Welding/Engineering Technology/Architecture

Mr. Ray Rickman
Bldg. NV-310, (850) 729-5218

Athletics, Health & Fitness
Mr. Ramsey Ross
Bldg. NV-200, (850) 729-5229

Bachelor of Applied Science
Ms. Wanjiku Jackson
Bldg. NV-360, (850) 729-5369

Business
Ms. Wanjiku Jackson
Bldg. NV-360, (850) 729-5369

Computer Technology
Ms. Wanjiku Jackson
Bldg. NV-360, (850) 729-5369

Criminal Justice Training Center
Mr. William Looper
Bldg. NV-510, (850) 729-5378

Criminal Justice
Mr. William Looper
Bldg. NV-510, (850) 729-5378

Dental Assisting
Ms. Julie Nelson
Bldg. NV-420, (850) 729-6444

Early Childhood Education
Dr. Inger McGee
Bldg. NV-520, (850)729-5341

EMT/Paramedic/Fire Science/Emergency Management
Mr. Barry Reed
Bldg. NV-510, (850) 729-4924

English/Communications & Social Sciences
Dr. Deborah Fontaine
Bldg. NV-420, (850) 729-5390

Humanities, Fine & Performing Arts
Dr. Jeremy Ribando
Bldg. NV-100, (850) 729-5382

Mathematics/Pre-Engineering
Mr. Chris Mizell
Bldg. NV-300, (850) 729-5377

Nursing AS/RN
Dr. Marty Walker
Bldg. NV-420, (850) 729-6400

Radiography
Ms. Grace Stewart
Bldg. NV-420, (850) 729-6457

Sciences/Biological & Physical
Pre-Medical & Pre-Pharmacy
Dr. Philip Heise
Bldg. NV-350, (850) 729-5376

Teacher Education
Dr. Inger McGee
Bldg. NV-520 (Q), (850) 729-5341

Florida Shines

Florida Shines allows access to student services and resources for Florida public community colleges, state colleges, universities, and many private institutions. Students may apply for transient status at other Florida institutions, view their student transcripts, run a degree audit or track progress toward graduation. FLVC can be accessed on the NWF State College RaiderNet log on page in the public access area or directly at http://www.floridashines.org

NWF2UWF

The NWF 2UWF Program offers collaborative academic advising from UWF Transfer Advisors and an on-site 2UWF Program Coordinator located on the NWF State College's Niceville campus. Students will also receive access to UWF services and benefits before they enroll. Students who complete an associate of arts degree at NWF State College are guaranteed admissions at UWF, contingent upon meeting the minimum transfer requirements.

- Admission to UWF with no application fee
- Convenient transfer of academic records and courses from NWF State College
- Affordable bachelor's degree from an accredited and respected public university
- Options to complete a bachelor's degree at one of three University of West Florida's locations:
    - Main Campus - Pensacola
    - Emerald Coast - Ft. Walton Beach, Eglin and Hurlburt Field Air Force Base

    - Online Campus
- Faculty and staff committed to academic success
- Flexible class schedules to meet busy lifestyles
- Experienced academic advisors to assist in satisfying degree requirements
- Library privileges at both institutions
- UWF email account
- UWF ID card

To participate in a 2UWF Program a student must:

- Meet current admission criteria at a state college partner.
- Have earned fewer than 30 credit hours.
- Complete an associate of arts degree with a minimum overall combined 2.0 GPA as computed by UWF. (Individual departmental requirements may be higher)
- Be in compliance with the code of conduct at a state college and is in good academic standing.
- Not attend another institution between the time you graduate from your current state college and enroll at UWF.
- Formally enroll in UWF within one year of having completed an associate of arts degree.
- Not have previously graduated from a state college partner.

Health Counseling

In case of illness or emergency please call 911. Health Services are not provided on campus.

Students can contact a licensed mental health counselor through Pattison Professional Counseling and Mediation Center by requesting a referral from the Academic Advising Center. Services are offered for assistance with domestic violence, sexual assault, AIDS, Victim advocate, substance abuse, and referral services. The Okaloosa AIDS Support and Information system: OASIS provides support at http://aidsoasis.org.

NWF State College Advisors and Counselors maintain local treatment referral services for health conditions such as drug or alcohol abuse, pregnancy and AIDS intervention. Students can contact the Dean of Students for more information.

Excess Hours Advisory Statement

Florida Statutes section 1009.286, establishes an "excess hour" surcharge for a student seeking a baccalaureate degree at a state university. This surcharge only applies to courses taken at a Florida public university and does NOT apply to any programs offered by Northwest Florida State. However, it is critical that students, including those entering Florida colleges, are aware of the potential for additional course fees.

"Excess hours" are defined as hours that go beyond 110% of the hours required for a baccalaureate degree program. For example, if the length of the program is 120 credit hours, the student may be subject to an excess hour surcharge for any credits attempted beyond 132 credit hours (120 X 110%).

All students whose educational plan may include earning a bachelor's degree should make every effort to enroll in and successfully complete those courses that are required for their intended major on their first attempt. Florida college students intending to transfer to a state university should identify a major or "transfer program" early and be advised of admission requirements for that program, including the approved common prerequisites. Course withdrawals and/or repeats, as well as enrollment in courses non-essential to the intended major, may contribute to a potential excess hours surcharge.

Enrollment

- Academic Load
- Audit Status
- Classification of Students
- Full-time and Part-time Status
- Registration
- Schedule Changes
- Withdrawing from Courses

Registration

Registration is the process of enrolling in courses and obtaining your schedule for the next term. Registration is required before a student can attend classes. Students can register online through RaiderNet. For information regarding important dates, visit the Academic Year Calendar online.

Students may register by computer via the college website or in person at any of our campus locations. Any student who has previously attended the college, and who has not been in attendance within one academic year, must reapply online at www.nwfsc.edu/admissions to update personal data, verify education goals, and residency.

Enrollment Status

Student Type	Full Time	3/4 Time	Half Time	Less than Half Time
College Credit, Vocational, Developmental	12 or more credit hours	9 credit hours	6 credit hours	less than 6 credit
Adult Basic Ed, ESOL, GED	20 contact hours			

Classification of Students

Students are classified according to the number of semester hours they have earned.

LOWER LEVEL

Freshman	A student who has 29 or fewer hours
Sophomore	A student who has 30 hours to 60 hours

UPPER LEVEL

Junior	A student who has 61 to 90 hours
Senior	A student who has 91 or more

Academic Load

The maximum load that may be carried by a student each term is eighteen (18) credit hours. Students seeking to enroll in more than eighteen (18) developmental, vocational, and/or college credits in a single term must have the prior approval of an advisor.

Audit Status

Students registering in a college-credit course on a "not-for-credit" basis will be enrolled in an audit status. Upon completion of the course, an "X" grade will be awarded with no impact on the student's GPA. Students may elect to change to audit after the end of the advertised drop/add period. An "XC" will count as an attempt toward full cost of instruction/repeat rules. Students auditing a class are not required to complete examinations but are expected to attend classes and participate in other activities and requirements on the same basis as students seeking credit. Some occupational courses may not be available on an audit basis. Students wishing to audit an occupational course must obtain permission in advance from the appropriate department head or division director. Audit enrollment in studio art classes is permitted on a space-available basis only. Students may audit a class no more than four (4) times.

Schedule Changes during the Schedule Adjustment Period

Changes in courses or sections may be made during the schedule adjustment period specified in the college calendar. Any such change can be accomplished either in person, by completing and processing the required forms at any NWF State College campus or center, or by logging on to RaiderNet.

Withdrawing From Courses

Enrollment	Registration Period	Time Frame	Transcripts Grades	Refund
Schedule Adjustment Period	Add or Drop a Class	First Week of Full Term	No Record Recorded	Full Refund
Withdraw	Drop one or more classes	Up to 60% period of the semester	W Grade	No Refund
Complete Withdrawal from College	No longer a currently enrolled student - Must consult with an Academic Advisor	Up to 60% period of the semester	W Grade	No Refund
Administrative Withdrawal	Mitigating Circumstances only with Dean Approval	Anytime	W Grade	No Refund

Student-Initiated Drop Prior to or during the Schedule Adjustment Period

If a student withdraws from a course within the established schedule adjustment period, the transaction is considered dropping a course and no record of the enrollment will appear on the student's transcript, nor will the enrollment count as an attempt for purposes of full cost or repeat rules.

Student-Initiated Withdrawal after the Schedule Adjustment Period

Students are permitted a maximum of two withdrawals per course in college credit, vocational or developmental courses. Upon the third and any subsequent attempt in such a course, the student will not be permitted to withdraw and will receive a grade for the course.

A student-initiated withdrawal can be processed up to the withdrawal deadline posted in the College Calendar. Withdraws can be completed using RaiderNet or by submitting a signed withdrawal form at the registration desk at any campus or center. If the student has not exceeded the approved number of withdrawals, the student will receive a grade of "W" on his/her transcript.

Complete Withdrawal from College

A currently enrolled student may completely withdraw from all of their classes up to the withdrawal deadline posted in the College Calendar and, thus, will no longer be considered a current student. The transcript will reflect a grade of a "W" for all currently enrolled classes. The student must first consult with an Academic Advisor to complete the process. Financial Aid recipients and student athletes must check with their appropriate representative(s) to determine financial ramifications for withdrawing, if applicable.

Administrative Withdrawal

Students may be administratively withdrawn from the College for reasons such as violation of college policies, procedures, student code of conduct, or for other mitigating circumstances. The Vice President of Academic Affairs or the Dean of Students can administratively withdraw a student at any time. Instructors may withdraw students who do not attend during the first week of class.

Distance Learning

- eCampus
- Final Examinations
- Online Course Orientation
- OnLine Instruction
- Online Support Services

eCampus

Technology and the Internet are integral parts of the education process at NWF State College. In keeping with current educational practice, students will be expected to use computer technology and internet communication throughout their college experience. All classes offered at NWF State College may require use of the Internet; such use may vary depending on the class delivery mode (traditional, hybrid, or online).

NWF State College's eCampus website (http://eCampus.nwfsc.edu) supports student learning through various methods and serves as the portal for online and hybrid classes. The site provides access to online classes for Distance Learning students and for students in traditional and hybrid classes using the College's online learning environment, D2L Brightspace.

Technical support for students using D2L Brightspace is available on the eCampus website or by filling out a Student Request for Technical Assistance form.

Online Classes

Online instruction reaches students needing flexibility and convenience. Online courses are conducted 100% online.

Hybrid Classes

Hybrid classes are traditional college classes combined with online activities to reduce class seat time. Hybrid classes provide the advantages of limited face-to-face instruction combined with the convenience of online learning. Thus, hybrid classes meet less often than a traditional class but provide the same course credit as a traditional class.

Online Instruction

NWF State College offers students the convenience and flexibility of earning course credits through various delivery modes so that students may take control of their own education by working and learning at times and places convenient to them. Online and hybrid classes carry the same course numbers and credits as their traditional counterparts and appear on the student's transcript just as any other course does; there is no designator on the transcript identifying a course as online or hybrid. Credits earned are transferable and are applicable to graduation requirements in the same manner as traditional classes. All NWF State College courses, including all online and hybrid courses, are taught by faculty holding credentials in the relevant subject matter. Students can search for online and hybrid classes by clicking the Class Search Quick link at https://ps-ssb.nwfsc.edu/PROD/bwckschd.p_disp_dyn_sched.

Online Course Orientations

To ensure the success of each student, every online instructor will provide an online orientation experience. Course orientations contain crucial information, such as course pace, how to submit assignments, grading requirements,

testing arrangements, and strategies for improving student success. A face-to-face orientation may be required for specialized programs, such as nursing; please see the class schedule for details.

Final Examinations

Final examinations for both traditional and Distance Learning classes are held at the end of each term and must be taken at the scheduled time unless other arrangements are approved in advance by the appropriate division director or department head. Final exam schedules are printed in the Schedule of Classes and are on the NWF State College website calendar for each term.

Online Support Services

NWF State College is committed to offering students the same quality of education through online and hybrid courses as it offers in the classroom. In addition to online tutoring provided through Smarthinking and online library help through Ask-a-Librarian, distance learning students have full access to college services at all physical locations. They may use on-campus resources, such as the Academic Success Center, the Career Center, Academic Advising and computer labs.

Online and hybrid courses are subject to the same rules as traditional, in-class courses for refunds, prerequisites, placement, withdrawals, repeat rules, grading, and other academic policies. Depending on student eligibility, financial assistance is generally available for these courses in the same manner as it is for traditional courses.

For more information, contact the eCampus/Learning Technologies Office at (850) 729-6464 or visit the eCampus website at http://eCampus.nwfsc.edu.

Student Records

Student Records

The Office of Academic Records and Enrollment houses all official records of students who have attended NWF State College or any of its previous names. Information is released only upon the written and signed request of the student in accordance with Federal laws.

Student Transcripts

A transcript is a student's official academic record. Students requesting an official transcript may do so online through RaiderNet. There is a fee for sending official transcripts. Transcripts will be sent within five (5) to ten (10) College business days of the request. Vocational and Undergraduate Level courses, grades and cumulative GPAs will display on separate transcripts. If you have taken courses at both levels, you will need to order both transcripts by choosing the "select all" option.

NOTE: Each state's Department of Education maintains their own GED transcripts. Students that received their GED in the state of Florida can obtain theirs by contacting the Florida Department of Education through their website.

Transcripts will not be released if the student has an outstanding financial obligation to the College or an incomplete admissions file.

Student Contact Information

It is the student's responsibility to notify the College of a change of address or phone number. Students can update contact information through RaiderNet or at any NWF State College location.

Family Educational Rights and Privacy Act of 1974, as Amended (FERPA), The Buckley Amendment

NWF State College upholds the Federal law, The Family Educational Rights and Privacy Act (FERPA), giving students the right to inspect, review, and amend their educational records. The College will not release or disclose information nor allow inspection of records without prior written permission from the student except under certain circumstances where, by law, prior consent is not required. Students have the right to file a complaint with the U.S. Department of Education if they feel their records have been inappropriately released. A student's FERPA rights begin when the student is "enrolled" as defined by NWF State College as the point when a student registers for class.

Eligible Parent:

A parent or guardian providing documentation that supports the student is a legal dependent for tax purposes may review a student's records.

Details:

The College will provide students in attendance with an annual notification of the rights available under FERPA.

Right to Review and Inspect:

Students have the right to review and inspect their permanent student records. A student desiring to review records may do so by submitting a request in writing to the Executive Director of Academic Records and Enrollment who will schedule such inspections within 45 College business days of the request. A student desiring copies of educational records may receive them after payment of a fee of $1.00 per sheet. This is exclusive of the normal transcript service.

Waiver of Right to Inspect:

The College will not provide confidential letters or statements of recommendation concerning admission to another educational institution, or applications for employment, unless the student has waived the right to inspect such letters or statements.

Right to Amend Educational Records:

The student, or eligible parents of the student, may direct challenges related to the accuracy of the educational records to the Executive Director of Academic Records and Enrollment. The Executive Director of Academic Records and Enrollment will schedule a hearing within 10 calendar days of initial notification of the challenge to allow the student to present evidence relevant to the matter at the hearing. The student, or eligible parents of the student, will be notified in writing of the results. A student can insert a statement in his/her record after a hearing regardless of the hearing outcome (whether the college maintains, upholds or rules against the challenge).

Disclosure Policy:

There are two types of information distinguished under FERPA: personally identifiable information and directory information. Certain conditions exist with regard to the disclosure of each kind of information. NWF State College complies as follows:

- **Personally Identifiable Information:**
  Personally Identifiable Information is information that includes identifying data such as social security number, academic work completed, grades, achievement test scores, aptitude test scores, health data, or other personal characteristics or information which would make the student's identity easily traceable. Prior consent, in the form of a signed and dated document, must be provided by the student to authorize the College to disclose personally identifiable information. The consent must specify the educational records that may be disclosed, should state the purpose of the disclosure, and must identify the party or class of parties to whom the disclosure may be made.
- **Directory Information:**
  FERPA allows for the disclosure of directory information as identified by the institution. NWF State College has designated the following as directory information:
    - NAME
    - LOCAL AND PERMANENT ADDRESS
    - NWF STATE COLLEGE STUDENT EMAIL ADDRESS
    - MAJOR
    - DATES OF ATTENDANCE
    - CURRENT ENROLLMENT STATUS (FT/PT)
    - DEGREE(S) EARNED AND DATE(S) AWARDED
    - HONORS AND AWARDS
    - PRIOR POSTSECONDARY INSTITUTION(S) ATTENDED
    - PARTICIPATION IN OFFICIALLY RECOGNIZED ACTIVITIES AND SPORTS
    - HEIGHT AND WEIGHT OF STUDENT ATHLETES

  A student has the right to refuse designation of any or all of this directory information by notifying the Executive Director of Academic Records and Enrollment, in writing, at least 10 calendar days prior to enrolling in the term that the directory information block should begin. Once a student obtains a confidential classification, it will not be removed until a signed authorization requesting it be removed is received by the

Registrar. A student's request to prevent the release of any informational items will result in preventing the publication of all items including graduation, honors, and awards.

Exceptions to the Disclosure Policy:

FERPA allows for the release of student records without written consent of the student under the following conditions:

- To school officials with a legitimate educational interest. The College has designated school officials such as faculty, administration, professional employees, support staff, work-study students, or persons employed by or under contract to the College (example: an attorney or auditor) acting as an official agent of the College to perform a business function or service on behalf of the institution. A school official is determined to have a legitimate educational interest if the information requested is necessary for that official to: perform appropriate tasks that are specified in his or her position description or by a contract agreement; institution research and studies, perform a task related to a student's education; perform a task related to the discipline of a student; provide a service or benefit relating to the student or student's family, such as health care, counseling, job placement, or financial aid. Disclosure to a school official having a legitimate educational interest does not constitute institutional authorization to transmit, share, or disclose any or all information received to a third party. An unauthorized disclosure of personally identifiable information from the education record of the students is prohibited.
- In compliance with a court order or subpoena
- To parents of a dependent student or such parents as defined in Section 152 of the Internal Revenue Code of 1954
- To schools in which a student seeks or intends to enroll
- To the Comptroller General of the United States, Attorney General of the United States, The Secretary of the Department of Education, and federal, state and local educational authorities involving an audit or evaluation of compliance with education programs
- In connection with the financial aid process
- In the event of a health or safety emergency where the information is required to resolve the emergency
- In the event that a student under the age of 21 has committed a drug or alcohol related offense
- As the result of a disciplinary hearing where the student is the perpetrator of a crime of violence or a non-forcible sex offense. Under this exception, information may be released to anyone, including the media. No information on the victim or witnesses may be released.

Students' Rights

A student has a right to file a complaint to The Family Policy Compliance Office, U. S. Department of Education, 400 Independence Ave., SW, Washington, D.C. 20202-4605, the office responsible for enforcing and administering the Family Educational Rights and Privacy Act. There are two basic requirements for a complaint to be properly filed against an institution in relation to FERPA infractions:

- The complaint must be made within 180 days of when the infraction was discovered.
- There must be sufficient facts (evidence) to prove the violation.

Enrollment and Degree Verification

The National Student Clearinghouse provides free enrollment and degree verifications for the purposes of employment, obtaining Military ID cards, Health Insurance or background screening. The National Student Clearinghouse can be contacted at:

Web: www.degreeverify.com Phone: (703) 742-4200 Email: degreeverify@studentclearinghouse.org	Address: National Student Clearinghouse 2300 Dulles Station Blvd., Suite 300 Herndon, VA 20171

Transient Students from NWF State College

Currently enrolled degree-seeking students may request approval from the Director of Records/Registrar to concurrently enroll at another college or university under limited extenuating circumstances. Students should complete an Application for Transient Study form prior to enrolling at the other institution. The form should be submitted to the Advising Office for initial review. Transient Student Authorization forms may be obtained online or from any NWF State College Center/Campus. An electronic version of the form is available for students attending a Florida public institution at https://www.floridashines.org/. Approval of transient study requests is determined by the Director of Advising and Testing and the Director of Records/Registrar. Upon completion of the course(s), request an official transcript to be sent directly to NWF State College Registrar's Office.

Students must meet the following criteria before approval can be granted:

- Be a degree-seeking student in good standing.
- Meet the appropriate NWF State College minimum credit hour residency requirement for the degree program.
- The requested course must be needed for the degree/certificate at NWF State College.
- Meet pre-requisites and/or testing requirements for the course at NWF State College.

Transfer Credit

Evaluation of transfer credit is completed for all degree-seeking students with a completed admission file. All credits at other colleges or universities accredited by one of the regional higher education accrediting bodies will be evaluated for transferability to the student's permanent record (transcript) as follows:

- For students pursuing an associate degree or college certificate, all attempted credits at the freshman and sophomore level, and
- For students pursuing a baccalaureate degree, all attempted credits at the freshman, sophomore, junior and senior level.

Credits recorded as transfer credit on the student's permanent record (transcript) do not guarantee that these credits will meet specific degree requirements for the student's program. The college may limit the number of transfer credits applicable towards the student's degree. The determination of how transfer credits may apply to a specific degree program rests with the College Registrar in consultation with the appropriate faculty/instructional staff.

The following factors will be considered in the evaluation of credits for transfer. The factors will be used in determining whether the course is transferable and in determining whether the course is recorded as a specific or unclassified course.

- Breadth, depth and rigor of course content as evidenced by course syllabi, prerequisites, placement test scores, exit requirements, student portfolios, textbooks, writing or oral communication requirements, grading standards, catalog descriptions, etc.
- Qualifications of the faculty member(s) providing the instruction
- Age of credits
- Recommendations through other established credit assessment bodies (e.g. ACE)
- Institutional accreditation via other professional assessment/accrediting bodies (e.g. AMA, NLN, state agency)

- Secondary documentation of course competencies (e.g. professional certification, standardized exam scores, etc.)

Recording Transfer Credits on the Student's Permanent Record (Transcript)

When evaluating credits, NWF State College reserves the right to delay recording the transfer credits on the student's permanent record until the student has completed admissions requirements, successfully completed college-level coursework at NWF State College, satisfied residency requirements and/or provided documentation or verification of student competencies. Final award or posting of credits to the student's permanent record may be contingent upon successful completion of one or more of the following requirements:

- NWF State College residency requirement;
- Higher-level courses in the same or a related subject area;
- Subsequent courses in the subject/course sequence;
- Demonstration of specific lab/clinical skills or other applied competencies;
- Additional independent/directed study in the subject area.

Once accepted, transfer credits will be recorded on the student's permanent record as externally awarded and will indicate the original institution awarding the credit. Transfer grades are not used in the cumulative GPA calculation towards credits earned at NWF State College. Where appropriate, an equivalent NWF State College course number will be indicated. When the college does not offer an equivalent course or if the course differs substantively from the suggested NWFSC course, the transfer credits may be listed on the transcript as an "unclassified" course. The unclassified credits will be further described as an open elective, a subject area elective, a general education elective or a general education subject area course, as appropriate.

Authority for Acceptance of Equivalent Courses

Section 1007.24(7), Florida Statutes, states:

"Any student who transfers among postsecondary institutions that are fully accredited by a regional or national accrediting agency recognized by the United States Department of Education and that participate in the statewide course numbering system shall be awarded credit by the receiving institution for courses satisfactorily completed by the student at the previous institutions. Credit shall be awarded if the courses are judged by the appropriate statewide course numbering system faculty committees representing school districts, public postsecondary educational institutions, and participating nonpublic postsecondary educational institutions to be academically equivalent to courses offered at the receiving institution, including equivalency of faculty credentials, regardless of the public or nonpublic control of the previous institution. The Department of Education shall ensure that credits to be accepted by a receiving institution are generated in courses for which the faculty possess credentials that are comparable to those required by the accrediting association of the receiving institution. The award of credit may be limited to courses that are entered in the statewide course numbering system. Credits awarded pursuant to this subsection shall satisfy institutional requirements on the same basis as credits awarded to native students."

Exceptions to the General Rule for Equivalency

Since the initial implementation of the SCNS, specific disciplines or types of courses have been exempted from the guarantee of transfer for equivalent courses. These include courses that must be evaluated individually or courses in which the student must be evaluated for mastery of skill and technique. The following courses are exceptions to the general rule for course equivalencies and may not transfer. Transferability is at the discretion of the receiving institution.

- Courses not offered by the receiving institution.
- For courses at non-regionally accredited institutions, courses offered prior to the established transfer date of the course in question.

- Courses in the _900-999 series are not automatically transferable, and must be evaluated individually. These include such courses as Special Topics, Internships, Apprenticeships, Practica, Study Abroad, Theses, and Dissertations.
- Developmental courses.
- Graduate courses.
- Internships, apprenticeships, practica, clinical experiences, and study abroad courses with numbers other than those ranging from 900-999.
- Applied courses in the performing arts (Art, Dance, Interior Design, Music, and Theatre) and skills courses in Criminal Justice (academy certificate courses) are not guaranteed as transferable. These courses need evidence of achievement (e.g., portfolio, audition, interview, etc.).

Courses at Nonregionally Accredited Institutions using Florida Common Course Numbering

The Statewide Common Course Numbering System (SCNS) makes available on its home page (http://scns.fldoe.org) a report entitled "Courses at Nonregionally Accredited Institutions" that contains a comprehensive listing of all nonpublic institution courses in the SCNS inventory, as well as each course's transfer level and transfer effective date. This report is updated monthly.

Questions about the SCNS and appeals regarding course credit transfer decisions should be directed to the Vice President of Academic Affairs, Building A, Niceville Campus, or to the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be requested by calling the SCNS office at (850) 245-0427 or at http://scns.fldoe.org.

Acceptance of Transfer Credits from Other Non-Regionally Accredited Institutions

Credits awarded at non-regionally accredited institutions may be accepted by NWF State College and placed on the transcript if the credits represent collegiate level coursework relevant to the program of study, with course credit and level of instruction resulting in student competencies at least equivalent to those of students enrolled in comparable instruction at NWF State College. Students will need to complete a Transfer Credit Appeal form in order for the credits to be evaluated. Acceptance of credits from non-regionally accredited institutions of higher education will be based upon recommendation from the NWF State College instructional department responsible for the course subject area(s) in conjunction with the Registrar.

Appeal of Transfer Credit

A student may appeal the denial of transfer credits by written request (Transfer Credit Appeal form) to the Record's Office. Credits in question will be reviewed by a subject area expert(s) from the instructional department normally responsible for the subject matter in question. The review process will parallel that applied to the general evaluation of credits for transfer. The final determination will be made by the Registrar's Office in consultation with Academic Affairs.

Application of Transfer Credits to Baccalaureate Degree Programs

Lower division college credits in technical areas not generally applicable at the baccalaureate degree level will be reviewed according to the following factors prior to their acceptance as satisfying degree requirements.

- Breadth, depth and rigor of course content as evidenced by course syllabi, prerequisites, placement test scores, exit requirements, student portfolios, textbooks, writing or oral communication requirements, grading standards, catalog descriptions, etc.
- Qualifications of the faculty member(s) providing the instruction

- Age of credits
- Recommendations through other established credit assessment bodies (e.g. ACE)
- Institutional accreditation via other professional assessment/accrediting bodies (e.g. AMA, NLN, state agency)
- Secondary documentation of course competencies (e.g. professional certification, standardized exam scores, etc.)

Where questions of applicability remain following such review, the credits may still be used to meet lower division degree requirements subject to one or more of the following conditions:

- Successful completion of related higher-level courses in the student's program of study;
- Successful completion of subsequent courses in the subject/course sequence;
- Successful completion of complementary lower division coursework in the subject or related area;
- Demonstration of specific lab/clinical skills or other applied competencies;
- Completion of additional supplemental independent/directed study in the subject area which augments the skills/content of the technical course;
- Presentation of a portfolio of work substantiating the breadth, depth and rigor of the course content to include both theory and applied competencies;
- Analysis of clusters of course credits where a combination of technical courses may represent baccalaureate level competencies when viewed as a package (e.g. eight credits in technical coursework may correspond to a three credit traditional transfer course in a given subject area);
- Verification of faculty credentials at the transferring institution.

International Students

International students must have their transcripts translated and evaluated by one of the credential evaluation agencies sanctioned by the National Association of Credential Evaluation Services, Inc. (NACES). Each course will be individually assessed for transfer consideration. Credits will be awarded on a course-by-course basis.

Credit by Alternative Means of Study

NWF State College will award credit for certain types of non-traditional study or credits earned through alternative means of study. No more than 75% of the credits in NWF State College's Baccalaureate, Associate and Certificate programs may be earned by alternate study. Alternative study methods covered under these limits include: Advanced Placement (AP), College Level Examination Program (CLEP), International Baccalaureate (IB), Excelsior College, Military Service School Credits, Correspondence Credits, the NWF State College's Course Challenge Exam Option, and Credits through Prior Learning Assessment. Credits for accelerated mechanisms defined under Florida rules and regulations will be awarded in accordance with Florida Administrative Code FAC 6A-10 and the State of Florida's Articulation Coordinating Committee Credit-by-Exam equivalents.

Advanced Placement Credits (AP):

NWF State College participates in the Advanced Placement program conducted by the College Board. Advanced Placement Tests may be taken at participating high schools or centers. Upon receipt of official score reports from the College Board, college credits will be awarded as determined by the Admissions' Office under guidelines established by the State Board of Education. Scores of 3, 4, and 5 will be accepted for credit. No credit will be allowed for scores of 1 or 2.

Cambridge A-Level & AS-Level Exams (AICE):

NWF State College will award credit through the AICE program upon receipt of an official score report, as determined by the Admissions Office under the guidelines established by the State Board of Education.

College Level Examination Program (CLEP):

College credits may be earned through the successful completion of general and subject level examinations. A 50th percentile score is required for credit. Upon receipt of official score reports from the College Board, specific courses in which credit may be awarded is determined by the Record/Registrar Office under guidelines established by the State Board of Education. For information regarding how to register for the test and how the credits will be accepted, please refer the NWF State College Testing Center CLEP webpage.

International Baccalaureate (IB):

Students may receive up to 30 college credits for International Baccalaureate (IB) program higher level and subsidiary level examinations. Upon receipt of an official score report college credit will be awarded as determined by the Admissions Office under guidelines established by the State Board of Education.

DSST Examination:

College credit may be earned through DSST examination program. The official score report should be submitted to the Records/Registrar office to be evaluated under the guidelines established by the State Board of Education. For information regarding how to register for the test and how the credits will be accepted, please refer the NWF State College Testing Center DSST (DANTES) webpage.

Excelsior College Examination:

NWF State College will award credit through the Excelsior College exam program upon receipt of an official score report, as determined by the Registrar's Office under the guidelines established by the State Board of Education.

Comprehensive Course Challenge Examination for Credit

Eligible degree-seeking students that have accumulated a minimum of fifteen (15) hours in residence with NWF State College may earn credit through successful completion of the College's Course Challenge Examination. The comprehensive examination is intended to verify skills and knowledge acquired through prior learning experiences and is available for courses listed below.

Course Challenge Exams are available for the following courses: (Courses not listed MAY be available by special permission)

Advanced Technology

- CET 2172C - Microcomputer Servicing **4 Credit Hours**
- ETD 1102 - Introduction to Technical Drawing **3 Credit Hours**

Allied Health

- HSC 1531 - Medical Terminology **3 Credit Hours**
- NSP 4275 - Introduction to Critical Care Nursing **3 Credit Hours**

Business/ Computer Technology

- CGS 1100 - Microcomputer Applications **3 Credit Hours**
- CGS 1550 - Introduction to World Wide Web **3 Credit Hours**
- CIS 1000 - Introduction to Computer Science **3 Credit Hours**
- CTS 2104 - Introduction to Windows **3 credit hours**
- GEB 1011 - Introduction to Business **3 credit hours**
- MAN 2300 - Personnel Management **3 credit hours**
- MAR 2011 - Introduction to Marketing **3 credit hours**
- MTB 1103 - Business Mathematics **3 credit hours**
- OST 1107 - Word Processing I **3 credit hours**

Mathematics

- MAT 1033A - Intermediate Algebra **4 Credit Hours**

Science

- HUN 2201 - Nutrition **3 Credit Hours**

Public Safety

- FFP 1801 - Introduction to Emergency Management Administration **2 Credit Hours**

Steps for Approval:

- The student should consult with the Division Director/Department Chairperson regarding the availability of a course challenge exam for the specific course. Division Director/Department Chairperson will approve or disapprove request. If approval is granted, a date, time and place for the test should be arranged.
- The Office of Enrollment Services will verify that the student meets all of the eligibility criteria. Students must be current/former student of NWF State College in good academic standing that are not currently enrolled but eligible to take the requested course. Student must not have received a grade (except 'W') nor enrolled in the course in the previous semester. Students are only allowed to attempt the Course Challenge once for each subject area and if there is no CLEP option available.
- The student takes the signed form to the Business Office and pays the $100 testing fee prior to taking the exam. The cashier notates on the form the receipt of the fees which serves as an admission ticket for the student to take to the exam.
- At the time the student takes the exam, he/she turns in the Course Challenge Exam form to the test administrator. At the end of the exam, the administrator will record whether the student passed or failed the exam and the form will be forwarded to the Registrar's office.
- If the student passes the exam, he/she will receive full credit for the course with a transcript grade of "P". If the student fails the exam, no grade will be recorded.

Jump Start: Career Pathways and Industry Certifications

"Jump Start" is the name applied to the Career Pathway and Industry Certification articulation program between Northwest Florida State College, the Okaloosa and Walton School Districts and all students who meet the General Provisions of the agreement. High School and Adult students who have participated in career/technical programs and/or obtained industry certifications, have the opportunity to apply skills acquired through those programs in partial fulfillment of a certificate and/or two-year degree program at NWF State College. The amount of credit awarded will depend upon established articulation agreements, skill assessment and departmental recommendations. Students

receiving credit under this option must complete credits in residence at NWF State College, per established agreements before the credits will appear on the student's permanent record (transcript).

Articulation of Vocational Courses and Credits

For students who meet certain requirements, the college may award credit for certain types of non-traditional study such as High School Career Academy Courses and Certifications, Certified Professional Secretary Exam, Child Development Associate Certification, Licensed Practical Nurse (LPN) Bridge, Fire Science Training, Certified Law Enforcement or Correctional Officers, Licensed EMT/Paramedic, External PSAV to PSV or Internal PSAV to PSV agreements, or other such agreements as established by the NWF State College Curriculum Committee.

Credits awarded through these means will be documented on the NWF State College Articulation Analysis form, which will reside in the student's permanent file in the Records Office. Credits received through these methods may not be transferable or applicable to the A.A. degree.

Students who complete a diploma or certificate from a vocational or technical school at less than the college level may receive credit toward partial completion of a related technical program at the college. Credit is awarded based upon the nature of the training, current skill levels, and relationship to college program standards. The amount of credit awarded will depend upon established articulation agreements, skill assessment and departmental recommendations. Students receiving credit under this option must complete credits in residence at NWF State College, per established agreements, before the alternate credits will appear on the student's permanent record (transcript). Additional minimum grade or course requirements, as well as demonstration of competencies may also be required.

Students who complete a vocational school certificate program, which is contained in an approved articulation agreement with the college, will receive credit toward completion of a related technical program at the college per the details of the agreement. Credits received in this manner may not be transferable to upper division schools nor be applicable to the A.A. degree.

Students who complete a vocational certificate at NWF State College may receive credit toward partial completion of a related technical program at the college according to the credit/ competency equivalents established by the NWF State College Curriculum Committee.

Final decisions regarding the award of credits and the recording of credits on the student's transcript rest with the College Registrar.

Credit for Armed Services Schools and Military Training

Credits resulting from classroom-type instruction (i.e., excluding on-the-job training and correspondence-type courses) at U.S. Air Force, Army, Coast Guard, Marine or Naval Schools will be evaluated as stated on the official transcripts issued by the Community College of the Air Force (CCAF), the Sailor/Marine/ACE Registry Transcript (SMART), the Army/American Council on Education Registry Transcript System (AARTS) or the Military Education Transcript from the Coast Guard Institute. Credits for occupational and vocational technical courses may apply toward an A.S. degree or Technical Certificate. Credits received in this manner may not be transferable nor be applicable to the B.A.S. or A.A. degree. CLEP and DANTES credits will be evaluated by the Registrar in keeping with the state of Florida Articulation Agreement between community colleges and universities, upon receipt of official score reports from the College Board.

Achievement Awards

A student who has successfully completed a given set of skill courses within a particular degree or certificate program may be recognized for his/her mastery of these competencies with a NWF State College Achievement Award. Although the award does not indicate completion of an official, approved program of study, it does verify the student's

proficiency with a specified group of skills. Achievement awards are not noted on the student's transcript or permanent record; however, the student will receive an NWF State College Achievement Certificate from the Office of Career and Technical Education that may be presented to an employer or agency as a record of this educational milestone. Students are encouraged to keep a copy of these awards as the college cannot guarantee that these can be duplicated.

Grades

Grades are awarded in all college, vocational, and developmental courses, as well as in certain non-credit courses. NWF State College maintains permanent records for all students registering for courses. A cumulative record of the student's grades appears on the transcript. Letter grades are assigned according to the grades.

A student has a right to a course grade that represents the instructor's professional judgment of the student's performance in the course, without personal prejudice. An instructor has a right to expect that the work presented for evaluation or submitted as classroom projects is that of the student acting alone without benefit of any aids or practices that are generally considered academically dishonest.

Grades Table

Academic Grade	General Meaning
A	Excellent
B	Good
C	Average
D	Poor/Passing
F	Failure
FA	Failure Due to Lack of Attendance
FN	Failure Never Attended
I	Incomplete
IP	In Progress
NG	No Grade
P	Passing
U	Unsatisfactory
V	Deferred Incomplete
W	Student Withdrew
WF	Student Withdrew Failing
WN	Withdrawn for Never Attending

X	Audit
XC	Changed to Audit After Schedule Adjustment Period

Grade Point Average (GPA)

The student's permanent record also contains grade point average (GPA) calculations. The student's GPA is used in determining academic standing, graduation readiness, eligibility for the President's and Dean's Lists, and in other academically related decisions. Your semester grade point average represents the average of your grades for only one semester. Your cumulative grade point average represents the average of the grades of all courses you have taken at NWF State College. Only grades for courses at 1000 level or above are used to compute GPA for graduation. College preparatory courses are not included in GPA calculations.

To determine the grade point average, multiply the number of quality points for each grade received by the number of credit hours for that course. Then divide the total number of quality points by the total number of GPA hours attempted excluding courses with W, I, and Audit grades. Vocational and Undergraduate Level courses are calculated separately.

As of Fall 2015, the College no longer includes course grades transferred from other institutions in the calculation of a student's GPA.

Credit hours pursued is defined as those credits in which a grade of A-F has been awarded. Grades of S, P, U, I, V, N, W, and X, do not carry grade quality points. In general, credits for these grades do not count in hours pursued. However, in certain other circumstances, such as determination of repeat enrollments, and in computation of certain specialized GPA's, credits which carry these grades may be included in the GPA computation.

Grade	Grade Quality Points
A	4
B	3
C	2
D	1
F	0

Example Course	Grade	Grade Points		Credit Hours	Quality Points
Speech	C	2	**x**	3	6
Algebra	C	2	**x**	3	6
American Literature	B	3	**x**	3	9
Chemistry	D	1	**x**	4	4
Health Science	A	4	**x**	2	8

Total Points					33
Total Semester Credit Hours				15	33/15=
GPA					2.20

Dean's and President's Lists

When the quality of a student's work is superior, the college is pleased to honor such work for students enrolled in all programs - Baccalaureate, Associate or Certificate programs through recognition as follows:

PRESIDENT'S LIST:

Any student with nine (9) or more earned college credit hours in the term and a term grade point average of 3.80 - 4.00 in college level courses is placed on the President's List.

DEAN'S LIST:

Any student with nine (9) or more earned college credit hours in the term and a term grade point average of 3.50 - 3.79 in college level courses is placed on the Dean's List.

Incomplete Grades

At the instructor's discretion, a grade of "I" may be given when a student is unable to complete the required work because of clearly documented extenuating circumstances and if the student has demonstrated successful completion of a significant portion of the course requirement that he/she has a reasonable chance of making a passing grade. The instructor files with the department chair, and with the student concerned, an outline of the work that must be completed, including an estimate of the student's grade standing for work already completed during the term. Work for the removal of the "I" must be completed prior to the LAST CLASS DAY in the next 16-week term immediately following except where course requirements mandate otherwise. Students completing course work to remove the "I" must do so outside the regular classroom setting. The grade will revert to an "F" on the official transcript if not removed by that time. A student will not be permitted to re-enroll in a course which he/she has an outstanding grade of "I" or for a class that has that course as a prerequisite.

In extraordinary circumstances, a deferred incomplete grade of "V" may be awarded when approved absences preclude satisfactory course completion by the end of the next 16-week term of enrollment.

Repeating Courses

Repeating a Course to Improve the Grade

If a student receives a grade of D, F, W, or U in a college credit, vocational or developmental course, he/she may repeat the course to improve the grade. Students are permitted a maximum of two enrollment attempts in such courses. A third and fourth attempt may be allowed only through an academic appeal process based on major extenuating circumstances. Any attempt to enroll in a course for a third/fourth attempt should be directed to the Dean of Students. On the third attempt, and any subsequent attempts, the student will be awarded the letter grade earned (A, B, C, D, F, S, U, or P) and will not be allowed to withdraw from the course. If a course withdrawal (drop) is processed prior to the close of the schedule adjustment period, or if audit status is declared prior to the end of the schedule adjustment period, the enrollment will not count as one of the attempts. Once a student has successfully completed a course (received a grade of A, B, C,) he/she will not be permitted to repeat the course. In certain special

or compelling circumstances, it may be possible to re-enroll after successful completion, but advance written approval must be obtained from the Vice President of Academic Affairs. Such circumstances include, for example, NWF State College program requirements, teacher recertification, license renewal, and mandated professional development. Grades earned in this manner will not replace grades earned in prior enrollments but will appear on the transcript.

For any course repeated, whether at NWF State College or elsewhere, only credit from the last attempt will be used in the computation of the student's grade point average and for meeting program requirements. Repeating a course results in an adjusted grade point average; however, if a course is repeated after the student has earned his/her A.A. degree, the student's grade point average will not change. Students should be aware that some private colleges and universities, as well as out-of-state institutions, and some Florida public universities (depending on the student's major) may not accept the revised GPA or treat the repeated course in the same manner.

Per Florida statute 1009.285, after the second attempt in a college credit or developmental course, a student will be required to pay the full cost of instruction (approximately four times the usual matriculation fees) to repeat the course. In documented cases of financial hardship or extenuating and compelling circumstances, the full cost requirement may be appealed through the Registrar's Office. Students receiving financial aid or veterans benefits should consult with a financial aid advisor before repeating a course; benefits and aid may not be available for certain repeat enrollments.

Repeating a Course for Credit toward Graduation

Certain courses, such as those in the fine and performing arts areas, physical education, and communications areas, may be repeated for credit toward graduation. The specific courses and the number of allowable repeat enrollments are provided in the course description section of this catalog. Only those courses designated as repeatable for credit fall into this category.

When a course is repeated under these circumstances, the full cost of instruction rule is not applicable until the maximum number of creditable repeats has been reached. All grades and credits associated with the allowable number of repeats will be considered in the student's GPA and will be considered in determining the credits for program completion. Once the maximum number of enrollments has been reached, additional enrollments will be treated as specified in the previous section on course repeats and may be subject to the full cost rule.

Repeating Non-credit Courses

Courses taken through Continuing Education, PRIME Time, the Institute for Professional Development, Kids on Campus, or Adult Education courses, including ABE, GED, and ESOL, are not subject to repeat rules.

Grade Changes/Errors

If a student believes there is an inadvertent error in the recording or the computation of his/her final course grade, the student should contact the instructor or the appropriate department office immediately. If an error has occurred, an adjustment to the student's permanent record (transcript) will be made within approximately ten (10) working days. The student is responsible for reporting such concerns within thirty (30) days of the close of the term in which the grade was awarded.

If a student has documentation of extraordinary or emergency circumstances which warrant recording a course withdrawal ("W") after the usual deadline, he/she must submit a written request for such change to the Dean of Students. If an adjustment is warranted, the change will be made within approximately ten (10) days. The student is responsible for requesting such changes within thirty (30) days of the term in which the original grade was awarded.

Grade Grievances

If a student believes that he/she has not been graded fairly in a course, an appeal may be filed at http://www.nwfsc.edu/disputes. The grade grievance process applies only to final course grades. Any appeal must be initiated within thirty (30) days of the date the grade was issued to the Registrar's Office. The student should first make an informal appeal to the instructor.

A student has a right to protection against the improper disclosure of information concerning grades, beliefs, or character which an instructor acquires in the course of the professional association with the student. An instructor has a right to deal with what is perceived to be academic dishonesty and such behavior may result in disciplinary action.

Academic History Grade Relief Option

A student who has been unsuccessful academically (i.e. grades of "D's" and "F's") and whose credits are five or more years old may seek relief from the effect of those credits on his/her grade point average at NWF State College by submitting a written appeal to the Vice President of Academic Affairs. If the request is granted, it will apply to all credits and grades earned prior to the date specified, and the student will not be permitted to count any of those credits toward graduation or program completion. The courses and grades will remain on the student's permanent record (transcript), but will not be considered in grade point average computations at NWF State College. Financial Aid is required by federal regulation to include all credit hours attempted in calculating eligibility for federal financial aid. Grade relief cannot be granted to students who have already graduated.

A student requesting this option should be aware that the relief may not be honored by other colleges and universities; other institutions may continue to consider the older credits and grades in evaluating the student's work. Relief through this process does not excuse the student from restrictions related to repeating courses or from compliance with other applicable college policies.

Academic Standing

The college has set academic standards ranging from recognition of excellence for superior progress to discontinuance of enrollment for inadequate progress towards these standards. In determining academic progress, college credit and vocational courses are combined. The standards apply to full and part-time students. They apply to those students who are seeking a degree or award and those who are not. Students enrolled in a Limited Admission or Limited Access program should contact the appropriate department or division office for information on programmatic certification and/or professional accreditation standards as they pertain to demonstrating satisfactory academic progress as these may vary by program.

Good Standing

A student is considered in academic good standing at the college as long as the student maintains a cumulative grade-point average (GPA) detailed below:

Credit Hours Attempted	Minimum GPA Required
0.00 - 11.99	N/A
12.00 - 24.99	1.50
25.00 & Over	2.00

Not in Academic Good Standing

When students fail to achieve the 2.00 cumulative GPA, the college will place certain restrictions on their future registrations and the courses for which they may enroll. In order to return to "Academic Good Standing", a student must increase the cumulative grade point average for all work attempted to at least the level specified for "Academic Good Standing." Students "Not in Academic Good Standing" are encouraged to take advantage of the tutorial services offered in the Academic Success Center. There are three states of being while "Not in Academic Good Standing" and the following regulations apply to these states:

Academic Warning

When students fail to meet these minimum standards, they will be put on Academic Warning for the following semester. Students on warning will be advised to see an Academic Advisor, who will recommend that the student take advantage of our many support services, including the Academic Success Center, to help improve their performance and fulfill their academic goals.

Students will be removed from Academic Warning if they have returned to good standing by bringing up their GPA to the required minimum standard.

Students will continue for a second semester on warning if they have successfully completed all courses attempted during the warning period, but have not yet brought their overall GPA up to the required minimum. Students will be placed on probation for the next semester if they have not returned to good standing and have not successfully completed all courses earning the minimum GPA for the semester while on warning.

Academic Probation

When put on Academic Probation the student will be monitored every semester and will be required to consult with an Academic Advisor to develop a mandatory prescriptive program each semester. This program may require the student to take a 50-percent reduction in course load from prior semesters, to repeat certain courses, or to take advantage of student support services such as those offered in the Academic Success Center.

Students will be removed from Academic Probation if they have returned to good standing by bringing their GPA up to the required minimum standard at the end of the semester. Students will continue for a second semester on probation if they have successfully completed all courses during the probation period but have not yet brought their overall GPA up to the required minimum.

Students will be placed on "Suspension" for the next semester if they have not returned to good standing and have not successfully completed all courses earning a the required minimum GPA for the semester on probation.

Academic Suspension

Students placed on Academic Suspension will be required to stop enrollment for one complete semester. They will be allowed to appeal a suspension based upon extraordinary, one-time events during their probationary semester that should not affect academic success in the future. Performance in developmental courses can be considered part of the appeal process. If a suspended student wishes to return, they may submit an appeal to the Registrar's Office requesting reinstatement. If a suspended student has already registered for classes, the classes will be dropped on the first day of the schedule adjustment period if the student does not complete an appeal or the appeal is denied. The appeal should explain what factors prevented the student from succeeding earlier and how those factors will no longer interfere with the student's progress and include supporting documentation. If the appeal is granted, the student also is required to meet with the advisor who initially approved the student's probation status to review and once again develop a prescriptive program before the student is allowed to register. The returning student will still be on probation and their status will be reviewed again at the end of the semester. If a student sits out a semester, then appeal to come back to school and do not improve in the semester they return, they will be suspended again and must sit out one semester. If a student makes progress but is still on Academic Suspension, The Registrar's office will allow them to keep taking classes as long as they keep making progress.

Financial Aid is required by federal regulation to include all credit hours attempted in calculating eligibility for federal financial aid.

Graduation

- Additional Degrees
- Diplomas
- Effective Catalog Changes
- Graduation Ceremonies
- Graduation Honors
- Graduation Process
- Graduation Regalia
- Student Responsibilities

Student Responsibilities

Graduation at NWF State College is an automatic process, streamlining the necessary steps for students and ensuring their transcripts reflect the degree or certificate earned. Students will be automatically graduated upon completing all degree requirements, and diplomas will be mailed to the address on file. Degree notations on transcripts will include academic terms in which all of the requirements were completed. Students may opt out of the automatic process with the registrar's office. Students opting out of auto-graduation understand the Registrar's Office will not award the certificate or degree. Students opting out of auto-graduation will need to complete a graduation application when ready to graduate. During the months of October (Fall), March (Spring) and June (Summer), the College will conduct a preliminary review of each currently enrolled student's degree audit. Students who will be "100% program complete" at the end of the term will be eligible for graduation. An email will be sent to eligible students informing them of their graduation status and inviting them to participate in the commencement ceremony.

To be eligible for graduation, a student must have a complete admission file, including all certificate programs as well. We must receive all official transcripts before the program completion can be posted to the transcript. If a student has an incomplete file or is completing the remaining courses as a transient student at a different institution, we must receive the official transcript by the current semester's deadline. Refer to your student email account for notifications regarding the deadline.

Students are responsible for selecting courses which meet program requirements and for earning the required minimum grades in those courses. Contact your adviser no later than two semesters prior to the anticipated graduation date to schedule an appointment and confirm all requirements. Students may review their graduation progress through the degree audit component of RaiderNet.

Effective Catalog Policy

Students must follow the requirements in effect at the time of initial enrollment in a program of study and are expected to complete the program within five catalog years. A student who is not continuously enrolled and is required to be readmitted must complete requirements for graduation under the catalog in effect at the time of re-entry. A student who does not complete the requirements within five catalog years will be evaluated for graduation using current catalog requirements.

Continuous enrollment is defined as enrollment in at least one course per major semester (Fall, Spring) during an academic year.

Additional Degrees

A student who earns a degree may be granted a second or additional degree under the following conditions:

- No more than one Associate in Arts degree may be granted.

- A Bachelor of Science, Bachelor of Applied Science, Associate in Science, and/or Associate of Applied Science degree may not be earned in the same program.
- The written degree plan for an additional Bachelor of Science or Bachelor of Applied Science degree shall specify the prerequisite and core courses for the additional degree. In meeting these requirements, the student may use courses completed for a previous degree. However, the student must complete at least 30 additional credits. The additional 30 credits may be core credits and/or general education credits but are usually technical courses that support the specific program of study. The degree plan including the additional courses must be approved in advance by the appropriate Department Chair, the college Registrar and the Vice President of Academic Affairs.
- The written degree plan for an additional Associate in Science degree shall specify the prerequisite and core courses for the additional degree. In meeting these requirements, the student may use courses completed for a previous degree. However, the student must complete at least 15 additional credits unless otherwise approved by an approved program of study. The additional 15 credits may be core credits and/or general education credits but are usually technical courses that support the specific program of study. The degree plan including the additional courses must be approved in advance by the appropriate Department Chair, the College Registrar and the Vice President of Academic Affairs.
- Students who have been awarded a State of Florida Associate of Arts degree, a baccalaureate degree from a regionally accredited institution or a comparable international institution may meet some of the graduation requirements by virtue of their previous degree. This may include Gordon Rule and general education requirements. Although, prerequisites for the major are still required. Students should contact their Academic Advisor or Registrar for additional information.
- All other requirements for graduation remain in effect for students pursuing additional degrees.

The Graduation Process

At the end of the term, graduates are reviewed for final program completion. Graduation will be posted to the official transcript within 10 business days of the final grade reporting date for instructors. Incomplete grades for the graduation term must be completed within 3 weeks of the end of the term. Transient transcripts with course work for the graduation term must be received within 3 weeks of the end of the term. Unsuccessful graduates must reapply for graduation in the future term they plan to graduate. Diplomas are mailed 6 – 8 weeks after the close of each term.

Graduation Honors

For students enrolled in a degree program (Baccalaureate and Associate) at the time of graduation, a student's total academic record is included in the calculation to determine recognition of outstanding academic achievement. If the student's cumulative grade point average for all college and vocational courses completed at NWF State College and at other transfer institutions meets the standards, and if the student meets all other graduation requirements, he or she will be graduated with the appropriate level of honors. The honors will be posted on the diploma and the transcript. Honors for students enrolled degree programs include:

Cum Laude	**Magna Cum Laude**	**Summa Cum Laude**
Cumulative GPA of 3.50 – 3.79	Cumulative GPA of 3.80 – 3.99	Cumulative GPA of 4.00

For students enrolled in a certificate or diploma program (Career and Technical, Vocational, College Credit or Applied Technology Diploma) at the time of graduation, all coursework pursued for the certificate or diploma will be included in the calculation to determine recognition of outstanding academic achievement. If the student's grade point average for the certificate or diploma course meets the standards, and if the student meets all other graduation requirements, he or she will be graduated with the appropriate level of honors. The honors will be posted on the diploma and the transcript. The honors for the students enrolled in certificate or diploma programs include:

Honors	High Honors	Highest Honors
Cumulative GPA of 3.50 – 3.79	Cumulative GPA of 3.80 – 3.99	Cumulative GPA of 4.00

Graduation Ceremony

NWF State College hosts two graduation ceremonies at the end of Spring semester. The ceremonies honors graduates from the previous Summer and Fall semester as well as potential Spring semester graduates. Students participating in the ceremony must RSVP prior to the ceremony. For more information regarding the Commencement Ceremony and to RSVP, please refer to the Graduation webpage.

Graduation Regalia

Graduation regalia to include cap, gown, tassel, and baccalaureate stole are available at the Barnes and Noble College Stores located on the Niceville campus approximately four weeks prior to graduation. Graduation regalia are required for participation. Honor cords are provided by the College and are given out at the commencement check-in. Borrowed regalia is not permitted. For more information regarding graduation, please refer to the Graduation webpage. For additional information concerning graduation regalia, please call the Niceville Barnes and Noble College Store at (850) 729-5384.

Diplomas

Diplomas are mailed 6-8 weeks after the close of each term to the address on the graduation application. Diplomas are issued in the name provided on the graduation application.

Campus Services

- Academic Success Center (ASC)
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Learning Resources Center

Academic Success Center (ASC)

The ASC is located on the first floor of the Library (Learning Resources Center-LRC), Building 500 on the Niceville Campus. We also have services available at the Fort Walton Beach Campus, the Sikes Center in Crestview, and at the Chautauqua Center in DeFuniak Springs. The ASC provides free learning support services in subjects such as writing, math, science, and many others. One on one appointments are available via walk-in and appointment (click here to make an appointment). The ASC also offers workshops, groups sessions, and online appointments via Zoom and paper submissions. For more information, call the Academic Success Center at (850) 729-5389.

Math Labs are located in the Math Building 300, Room L-131, on the Niceville Campus; in Building 7, Room 702 on the Fort Walton Beach Campus. The math labs are open to all students and provide free walk-in tutoring for all mathematics courses. For lab hours, students may call the Math Department at (850) 729-5377 or visit our website.

AmeriCorps

AmeriCorps is a component of the National Service Network. Its goal is to engage Americans of all ages and backgrounds in service to help meet communities' critical education, public safety, environmental, and other human needs and homeland security. AmeriCorps is often referred to as the "Domestic Peace Corps".

Full-time members serve a minimum of 1720 hours per service year. They receive a taxable living allowance of $12,630 per year while serving and a $5,815.00 education award voucher at the end of the service commitment. Other benefits for full-time members include healthcare insurance and student loan deferment and childcare (if qualified).

For more information, please call (850) 729-6037 for information on the program.

ATM Machines

ATM machines are located in the Activities Center, Building 410 on the Niceville Campus and in the Administration Building on the Fort Walton Beach Campus.

Barnes & Noble College Stores

NWF State College has two College Stores which are operated by Barnes & Noble College. The College Store on the Niceville Campus is located in the Activities Center, Building 410. The Fort Walton Beach Campus College Store is located in the Student Services Building. Both stores are full-service stores offering textbooks, supplies, college clothing, gift items, hardware, and software. The stores maintain extended hours during back-to-school and book buy back periods. Contact the College Store or visit the Barnes & Noble College Store website for store hours.

Career Center

The Career Center provides career planning assistance for students and the community. The Career Center offers interest and skills assessments, career information, help with resume preparation and a variety of workshops. The program assists students with making an education and training choice that will enable them to enter or reenter the workforce with marketable skills.

A new partnership with CareerSource Okaloosa-Walton has enabled us to now have a CareerSource advisor available to meet with students and community members at the Niceville Campus Career Center. Services include: job seeker services, career counseling, employment search workshops, and labor market information. Prove-It! Skills testing is also available and offers over 1,200 validated assessments for a variety of employment sectors. Phone 850.729.4994 to set up an appointment. Walk-ins are always welcome.

Students who are undecided about their future career plans are encouraged to make an appointment with their Academic Advisor or to visit the Career Center located in the Activities Center, Building 410 on the Niceville Campus (Phone 850.729.5227) or Building 2 at the DeFuniak Springs Chautauqua Center (Phone 850.200.4113) to discuss career opportunities. Selected career-related services are also available at the Fort Walton Beach Campus and the Robert L. F. Sikes Education Center.

The Career Center offers numerous career assessment services, including:

- Career counseling
- Web-based career planning information
- College-wide career focus workshops
- Job fairs information
- Occupational information linked to NWF State College degree and certificate programs
- Computerized career exploration programs:
    - My Career Shines is a Career Planning tool hosted by the state of Florida and available on any computer. The NWF State College Career Center has computers available in their Career Counseling area for students to access this powerful program to set up an account and explore career, education and scholarship opportunities.
    - Strong II - The Strong Interest Inventory provides information on overall patterns of interests, preferences and personal styles that can be explored for the immediate and long-range educational and career planning.
    - Myers-Briggs Type Indicator - This is a personality instrument based on psychological types and temperaments. It provides information about your personality style and the way you interact with other people.

Disability Support Services

NWF State College is committed to the fulfillment of equal educational opportunities to all students. In compliance with the regulations of Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the ADA Amendments Act of 2008, the office of Disability Support Services (DSS) exists to determine appropriate accommodations for qualified students with documented disabilities, to assist students in self-advocacy, and to educate the NWF State College community about disabilities.

Students in need of assistance are encouraged to register with DSS which is located in the Student Services Center on the Niceville campus. Appropriate documentation guidelines are located on the college website. All information is kept confidential. Students who register may be eligible for accommodations such as, but not limited to, note-taker, scribe, interpreter, extended time for testing, course substitution, use of an audio recording device and tests recorded on tape.

Telephone Device for the Deaf (TDD) numbers are available through the Florida Telecommunication Relay Service:

Voice: 711 or 1-800-955-8770

TDD: 711 or 1-800-955-8771

Students who feel that the College did not respond appropriately to their disability requirements are asked to show NWF State College the particulars of the complaint. Students should first discuss the problem with the Counselor of Students with Disabilities in an attempt to informally resolve the issue. If unable to resolve the issue informally, a student may file a formal student grievance through the office of Disability Support Services. It will be forwarded to the Dean of Students and follow the College's procedures for filing a grievance.

Learning Resources Center

During the Fall and Spring Terms, the library is open Monday through Thursday from 7:30 am to 9:00 pm, Fridays from 7:30 am to 5:00 pm, and Saturdays from 9:00 am to 1:00 pm. Hours vary during the Summer Terms. Please visit the LRC website for hours and additional information or call (850) 729-5318.

Mary Lou O'Connor Child Development and Education Center

The College's Mary Lou O'Connor Child Development and Education Center provides comprehensive, quality care for children ages 2.5 to 5. The center is nationally accredited and is open to dependents of NWF State College students, staff, faculty and members of the community on a space available basis. The center is located in Building 530 on the Niceville Campus and is open Monday through Friday from 7:00 am to 5:30 pm. The college participates in the Florida Voluntary Pre-Kindergarten (VPK) program. For more information call (850) 729-5386.

Photocopies

The RaiderCard may be used to make copies at the locations listed below.

- Niceville Campus - The Learning Resources Center
- Fort Walton Beach Campus – Library

Raider Café

The Raider Café, located in the Activities Center, Building 410, on the Niceville Campus, is open Monday through Friday from 7:15 am to 2:00 pm during the Fall and Spring Terms and Monday through Thursday from 7:30 am to 2:00 pm during the Summer Term. Vending machines are available at the Fort Walton Beach Campus in the Student Services Building, Building 6 and Building 3. Vending machines are also available in the student lounge areas at the Chautauqua and Sikes Centers.

Veteran's Success Center

The Veterans Success Center, located in the Student Services Center, Building 400 on the Niceville campus, can assist veterans and families with educational goals and transition into the workplace.

Student Life

Get Involved

College is much more than just academics. The invaluable experiences gained through co-curricular activities can't just be delivered in the classroom alone. The term "co-curricular" replaced the previously used term "extra-curricular" to emphasize that your involvement outside the classroom goes hand in hand with your classroom academics!

Student Life strives to cultivate a campus environment that promotes equity, opportunities for all students to participate in extracurricular activities, and the environment for each student to learn and practice essential skills needed after college life. Student Life provides support to students, student organizations, community service projects, and community activities that may enhance the quality of educational life for students. Student Life also provides social and cultural enrichment opportunities in Okaloosa and Walton counties.

Athletics

NWF State College is an active member of the National Junior College Athletic Association (NJCAA) and the Florida College System Activities Association (FCSAA) which is composed of all public community and state colleges in Florida. Visit Raider Athletics for more information.

Intercollegiate Sports

Intercollegiate Sports operate under the rules and regulations of NJCAA and FCSAA. Varsity athletes enjoy the privilege, honor, and social distinction of representing the college in the field of athletic competition. Representation of the college is open by competitive selection to all students provided they meet the eligibility requirements of the FCSAA. Intercollegiate sports include basketball for men and women, baseball for men, and fast-pitch softball for women.

Intramural Activities

Intramural Activities may be offered based on student interest. These include team sports such as flag football, volleyball, softball, tennis, and basketball, as well as individual and recreational sports such as tennis, racquetball, and backgammon. Classes, clubs, organizations and independent groups are encouraged to form teams and compete.

Times, schedules, and places of meeting for activities are posted on the bulletin boards located in the Activities Center and throughout the Niceville Campus.

Student Organizations

Student Life oversees a wide variety of student organizations that cover many interests and activities. Membership is open to all students who qualify, without regard to age, color, creed, handicap, marital status, national origin, race, religion or sex, except for those particular groups which are selective on the basis of scholarship. For more information on getting involved with a student organization or starting one, visit Student Life or contact the office at (850) 729-5348.

Student Government Association

Student Government Association (SGA) provides a voice for the Northwest Florida State College student body in all college affairs while helping to further the goals of the college from a student perspective. The President of SGA is a

member of the Administrators, Supervisors and Professionals Council (ASP) and represents the student body. The SGA president receives a yearly tuition scholarship. The SGA Senate and President are housed in the Activities Center.

SGA participates with the Florida College System Student Government Association (FCSSGA) in representing students across the state to advocate change in Florida legislation beneficial to all college students. Lastly, SGA coordinates and regulates various activities for students such as fall and spring flings and various service learning opportunities.

All currently enrolled students of NWF State College are members of SGA with the right to full voice, upon recognition, in all SGA functions. However, the only students with the right to vote in SGA functions are; the elected Vice-President, elected and appointed Senators, and appointed Officers of the SGA Executive Board; In the event of a tie vote at any SGA function, the SGA President will cast the deciding vote.

Student Activities Board

Student Activities Board (SAB) provides coordination among all of student clubs and organizations. The executive board consists of a member from each of the school sanctioned organizations: Brain Bowl, Forensics, Phi Theta Kappa, and SGA. The SAB makes budgeting decisions regarding student activity funding. The vice president of SGA is the presiding officer and receives a tuition scholarship.

The names of recognized student organizations are owned by NWF State College. Students or others shall not organize independent groups of the same name nor function as a group independent of the college utilizing the name of a NWFSC student organization.

Student Organization Terms

Each student activity, club, and organization authorized to function in the name of the College shall be organized, chartered and operated in accordance with Florida Statutes, State Board Rules, NWF State College Student Handbook, and the Student Organization Handbook. Visit Student Life for more information.

Student Handbook

Notice of Equal Access / Equal Opportunity and Nondiscrimination

Northwest Florida State College is dedicated to the concepts of equity and equal opportunity. It is the specific intention of the college not to discriminate on the basis of age, color, ethnicity, disability, marital status, national origin, race, pregnancy, religion, genetic information, or gender, in its employment practices or in the admission and treatment of students in its programs or activities.

Title IX of the Education Amendments of 1972 (20 U.S.C. ss1681) is an all-encompassing federal law that prohibits discrimination based on the sex of students, employees, and third parties when appropriate, of educational institutions which receive federal financial assistance. Sexual harassment of students, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. Northwest Florida State College complies with all aspects of this and other federal and state laws regarding non-discrimination.

Anyone with questions about compliance or a complaint regarding harassment or discrimination, including sexual harassment and sexual violence of Title IX, should contact the College's Equity Coordinator using the following contact information:

Roberta Mackey

Executive Director of Human Resources, Equity Coordinator
100 College Blvd. Niceville, FL 32578
Building: 320
Phone: (850) 729-5337

Email: mackeyr@nwfsc.edu

The college environment is an open intellectual forum where varying opinions may be freely expressed and fairly debated. Each member of the college is expected to participate seriously and purposefully in college life. While the freedom to express ideas and beliefs will be respected, conduct and behavior that result in the defacement of property, intimidation of others, or the disruption of any college activity will not be tolerated or permitted and will be subject to disciplinary action. Instructors explain classroom requirements, and students are expected to assume full responsibility for their own actions.

College Accreditation

Southern Association of Colleges and Schools Commission on Colleges (SACSCOC)

Northwest Florida State College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate and associate degrees, certificates and diplomas. Contact the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, www.sacscoc.org, or call 404-679-4500 for questions about the accreditation of Northwest Florida State College.

NWF State College Website

The Northwest Florida State College website is located at www.nwfsc.edu. The website provides access to College information such as admission, registration, financial aid, bookstore, student life, academic resources, instructor websites and more.

RaiderNet

RaiderNet is the student on-line information and registration system. RaiderNet provides access to update contact information, register for classes, view grades, obtain unofficial transcripts, enrollment verification, degree audit, and financial aid status. To access RaiderNet from the college's homepage, click the quick link "RaiderNet" on www.nwfsc.edu. For questions concerning access to RaiderNet, call (850) 729-6922.

Student Email Accounts

Students are assigned an NWF State College student email account during the application for admission process. The student email address serves as the official method of communication to the student from the college. This email service is reserved for college business. For more information and to access student email, go to www.nwfsc.edu. Send questions concerning access to student email to helpdesk@nwfsc.edu or call (850) 729-5396.

Attendance

Regular and prompt attendance in all classes is expected. All instructors are free to establish attendance policies for their classes. It is the student's responsibility to notify the instructor and make arrangements to complete any missed work. (Make-up work is offered solely at the discretion of the instructor.) Excessive absences can affect the success of course completion and financial aid funding. This general policy applies to the student absent from class traveling as a member of a college group, or club or for personal reasons.

Religious Observance by Students

The College shall accommodate recognized religious observances of students under existing State directives. Provision shall be made for students to complete the following activities when their religious observances interfere with the following:

1. Admission and registration
2. Attendance in class, class activities, examinations, and official ceremonies
3. Class work assignments

Students wishing to participate in any recognized religious holiday observances are to let the instructor know, in advance, of their absence. Students will be excused for such absences without penalty. Students are responsible for any material covered during their excused absence. A reasonable amount of time will be allowed to complete make up assignments. Students who believe they have been denied an education benefit because of their religious belief or practice may seek redress as outlined in the Student Grievance Procedures.

Children on Campus

NWF State College values family life and has worked to develop policies that are supportive of families. However, it is the policy of NWF State College that students and visitors should not use the College in lieu of a childcare provider. Accordingly, minor children of employees, students, or visitors may be on campus only under the special circumstances outlined below. Contact the Dean of Students for any questions or concerns.

- Minor children are permitted on campus when the purpose of their visit is to participate in activities, classes, or events specifically scheduled for their benefit (e.g. Kids on Campus, Children's Fine Arts Series, Child Development and Education Center).
- Minor children are permitted on campus when with a parent or responsible adult who is conducting routine business at the college.
- Minor children are not permitted in labs, shops, construction/repair sites, classrooms, offices, labs, or other areas where potential hazards exist, unless enrolled in classes or activities scheduled at the site.

- In an emergency or other compelling situation, students or staff may bring children to class or the workplace on an incidental, individual basis, provided advance approval is obtained from the appropriate administrator. In such cases, the children must be directly supervised by the parent/adult and must not disrupt or distract the flow of college work, services or instruction.
- Minor children on campus must be directly supervised at all times.

Service Animals

Service animals are permitted on NWF State College campuses. Service animals are defined by the American Disabilities Act (ADA) as "*dogs that are individually trained to do work or perform tasks for people with disabilities*." Please see the ADA Requirements and Florida Statute 413.081 regarding services animals. Therapeutic animals are not considered to be service animals and are not permitted on NWF State College campuses.

Service animals must be under control of the handler at all times. The handler is responsible for the care, cleanup of all animal waste, and for ensuring that the animal is not disruptive to any program, service, learning environment, or college activity. A service animal may be removed by state, local government, campus authorities, or the handler may be requested to remove the animal from college premises, if it is disruptive, aggressive, unhygienic, or behaving in ways outside the duties of a service animal (wandering, barking, etc.)

Mental Health Counseling Services

Northwest Florida State College has teamed up with local agencies to provide mental health counseling services for NWF State College students who need assistance coping with the challenges of college life, as well as, academic performance. Referrals are handled through the Vice President of Student Success, located in the Student Services Center at the Niceville campus.

- Pattison Professional Counseling and Mediation Center helps students overcome personal challenges. Refer to www.ppccfl.com or (850) 863-2873 for additional information.
- Bridgeway Center is a non-profit psychological healthcare company in Okaloosa County serving children, adults, and families. Refer to www.bridgewaycenter.org or (850) 833-7500 / (850) 689-7810 for additional information.
- Florida Panhandle 211 Get Connected, Get Answers COPE Center is a referral hotline staffed with trained certified resource specialists to offer guidance and support to citizens of Walton County. By dialing 211 from any phone, people will be linked to services for clothing, food, financial assistance, employment, dentistry, healthcare providers, transportation, tutoring, child care, home health care, counseling, drug rehabilitation, and evaluations etc. Call (850) 892-8045 for additional information.
- Crestview Health Center provides low cost medical, dental, and counseling services to everyone, including uninsured and underinsured. Call 850-682-1164 for more information.

AIDS and HIV

Northwest Florida State College Policy #GP12.00 and FS 1006.68 states that students with AIDS or who are HIV positive are not denied admission to the college. Students are encouraged to confidentiality disclose to the Disability Support Services if needed to obtain accommodations in classrooms such as lab classes. The Vice President of Student Success has a referral system for regional health services for assistance.

Substance Abuse

NWF State College Drug-Free Work Place policy #HR 4.00 states that Northwest Florida State College is alcohol and drug free in accordance with Public Law 100-690, The Anti-Drug Abuse Act of 1988. The unlawful manufacture,

distribution, dispensation, possession, or use of alcohol or a controlled substance is prohibited in and on NWFSC owned and controlled property except for events specifically approved to include alcohol. Students in violation will be subject to disciplinary action as stated in the Student Code of Conduct published in the Student Handbook/College Catalog and may be subject to criminal prosecution.

Tobacco Use

NWF State College Smoking and Tobacco policy #HR 23.00 states:

"Smoking (including E-cigarettes) and tobacco use are prohibited in all College owned or leased buildings including common areas and in College vehicles. Common area means any hallway, corridor, aisle, water fountain area, restroom, stairwell, entryway, or breezeway. Smoking and tobacco use, including all tobacco products, are prohibited within 30 feet of entryways.

A smoking area may not be designated in any College owned or leased building or common areas".

Parking Regulations

All vehicle operators are responsible for complying with Northwest Florida State College's parking regulations whenever they bring a vehicle on campus. Vehicles parked on any of the Northwest Florida State College's locations must display a valid parking permit or temporary parking permit. The College cannot assume responsibility for vehicle contents while on NWF State College premises. Driving on campus is a privilege. The College has the right to revoke privileges of operating a vehicle on campus.

Parking Permits

Parking permits are available online and at all NWF State College locations. Visit Parking Services for more information on aquiring a parking permit.

Designated Parking Areas

White Lines	Student Parking
Yellow Lines	Faculty/Staff Parking
Blue Lines	Disabled Person Parking
Green Lines	Visitor Parking

Parking Violations

Violation	Fee
PARKED ACROSS PARKING LINES Vehicle tire parked on or over the parking line in a manner that impedes parking in adjacent space.	$25
PARKED IN NO PARKING ZONE	$25

PARKED IN AREA NOT DESIGNATED FOR PARKING Parked in a loading or unloading zone not designated for parking.	$25
PARKED ON WALKS OR GROUNDS	$25
PARKED IN DESIGNATED SPACE Vehicle parked in Faculty/Staff parking without proper permit. A non-visitor parked in visitor parking.	$25
PARKED IN DISABLED PARKING (+Tow Away Infraction) It is unlawful for any person to stop, stand, or park a vehicle within, or to obstruct, any such specially designated and marked parking space provided in accordance with s. 553.5041, unless the vehicle displays a disabled parking permit issued under s. 316.1958 or s. 320.0848 or a license plate issued under s. 320.084, s. 320.0842, s. 320.0843, or s. 320.0845, and the vehicle is transporting the person to whom the displayed permit is issued. Vehicle will be towed at owner's expense.	$25
DOUBLE PARKED Vehicle is parked alongside another vehicle already parked at a curb.	$25
OBSTRUCTING DRIVE, FIRE HYDRANT/LANE (+Immobilization)	$50
OBSTRUCTING OTHER VEHICLES (+Immobilization)	$50
NO VALID PERMIT DISPLAYED Vehicles are require to display a valid permit or decal on the rear view mirror or driver side dash. Permit information must be visible from outside of the vehicle. Decals should be displayed on the front fork of the motorcycle.	$25
IMMOBILIZATION Vehicle has outstanding citation fees from various violation(s) previously issued. Pay outstanding fees and immobilization fee to have boot removed.	$25
PERMIT NOT REGISTERED TO VEHICLE Each vehicle being used with a permit must be registered with designated permit. Using permit with an unregistered vehicle is a violation.	$25
FORGED PERMIT (+Immobilization) Any vehicle displaying a forged parking permit (ie: photocopy, picture of, etc).	$50

The Student Traffic Court

The Student Traffic Court convenes, as needed, to adjudicate appeals of parking citations for students. After traffic court deliberation, results are emailed to your registered email with Permit Express. Visit the Parking Services site for more information on appealing citations.

Posting, Circulating and Exhibiting Printed and Filmed Information

Students are expected to use mature judgment and a sense of discretion in their selection, publication, display, presentation and circulation of any printed or filmed materials at any college location, and to realize that they must accept responsibility individually and collectively for the consequences of their choices on these matters. The appearance of the college name, seal or insignia on any material which is not published by the college is not authorized and does not imply college approval or endorsement of the contents.

Notices

Notices may be posted by students and recognized student organizations on appropriate bulletin boards. Notices and posters are not to be taped, glued, or pasted on painted or finished surfaces. All such posting must be cleared in advance by the Director of Student Life at the Niceville Campus. College Center Directors may approve notices at their respective locations. The general distribution of notices is prohibited by anyone other than instructional and staff personnel in the performance of their duties or by recognized student organizations to advertise an approved event.

Student Publications

Student publications (which may include video media newscasts) are intended to foster an atmosphere of free and responsible discussion and intellectual exploration. They are a means of bringing student concerns to the attention of faculty and staff members, and of formulating student opinion on various issues at the college and in the surrounding community.

The editorial freedom of student editors entails the corollary responsibility to be governed by the canons of responsible journalism, such as the avoidance of libel, indecency, undocumented allegations, attacks on personal integrity, and the techniques of harassment and innuendo.

Student publications shall contain a statement to the effect that the opinions expressed therein are not necessarily those of the faculty, staff or student body of the college.

Student Fundraising

Fundraising activities by students and/or student organizations are permissible when the specific purpose is to support institutional scholarships, humanitarian/charitable efforts, or a recognized student organization's mission and goals. Students/Student Organizations must receive approval by completing the Activity Request Form located on the Student Life website at least one month prior to the activity's scheduled date.

Policy Formulation

A student who wishes to suggest a change in any policy of the college should submit a written recommendation to the Student Senate for evaluation. If favorably received by the Senate, the proposal shall be submitted by the Student Senate to the appropriate standing committee/subcommittee of the college for consideration. Students serve on various college committees such as the Budget committee.

Student Right to Know and Campus Security Act of 1990

The Student Right to Know and Campus Security Act (P.L. 101-542) requires the College to compile and release completion, graduation, and transfer-out rates for all students, safety and policies and crime statistics. This information is available from the Office of Institutional Research.

The campus security policy and crime statistics are published below.

Campus Security Policy

All criminal incidents can and should be reported to the NWF State College administrator in charge of a function, the campus receptionist, or an attending faculty or staff member. NWF State College will implement appropriate actions including, but not limited to, contacting the presiding law enforcement agency, any medical services needed or others as appropriate. Incident Forms are available in Dean of Students Office, the Business Office and the off-campus centers. All incidents must be communicated, in writing, to the Vice President for Administrative Services or the Dean of Students as soon as possible.

Summary of Reported Crimes on Campus

This information is provided to all students and employees in compliance with The Federal Student Right-to-Know and Campus Security Act. Questions about this report or Campus Security in general may be directed to the Director of Physical Plant Department or the Dean of Students.

	2011		2012		2013	
	Total Crimes	**Hate Crimes**	**Total Crimes**	**Hate Crimes**	**Total Crimes**	**Hate Crimes**
Homicide Offenses	0	0	0	0	0	0
Sex Offenses, Nonforcible	0	0	0	0	0	0
Sex Offenses, Forcible	0	0	0	0	0	0
Robbery	0	0	0	0	0	0
Aggravated Assault	0	0	0	0	0	0
Burglary / Breaking & Entering	0	0	0	0	0	0
Larceny / Theft Offenses	2	0	0	0	0	0
Motor Vehicle Theft	0	0	0	0	0	0
Liquor Law Violations	0	0	0	0	0	0
Drug Abuse Violations	0	0	0	0	0	0
Weapon Possessions	0	0	0	0	0	0

Federal and State law requires a person designated as a "sexual predator or offender" to register with the Florida Department of Law Enforcement (FDLE). The FDLE then is required to notify the local law enforcement agency where the registrant resides or attends an institution of higher learning. Information regarding sexual predators or offenders attending an institution of higher learning may be obtained from the local law enforcement agency with jurisdiction for the particular NWF State College campus or center, by calling the FDLE hotline (1-888-FL-PREDATOR) or (1-888-357-7332), by visiting the FDLE website at www.fdle.state.fl.us, or the Dean of Students.

A Student's Guide to Reporting Harassment

The purpose of this guide is to ensure an orderly resolution of charges of sexual, racial, or other forms of harassment brought by students at NWF State College. Sexual harassment and racial harassment have been held to constitute a form of discrimination prohibited by the Title VII of the Civil Rights Act of 1964, as amended and Title IX of the Education Amendments of 1972. Applicable law prohibits other types of harassment.

NWF State College upholds the Clery Act and Violence Against Women Reauthorization Act of 2013.

NWF State College prohibits all acts of harassment and will properly investigate any claims of harassment.

Sexual and Other Unlawful Harassment

NWF State College is committed to providing an educational and work environment that is free from all forms of discrimination and harassment. NWF State College expressly prohibits any form of unlawful discrimination or harassment based on race, color, gender, religion, national origin, age, ethnicity, marital status, or disability or genetic information. NWF State College provides ongoing harassment training to ensure everyone the opportunity to work and/or learn in an environment free of sexual and other unlawful harassment.

Definitions of Harassment

Sexual harassment is defined as unwanted sexual advances, including visual, verbal, or physical conduct of a sexual nature. This definition includes gender-based harassment of a person of the same sex as the harasser. Examples of conduct expressly prohibited by the policy include, but are not limited to, the following:

- Making unwanted sexual advances.
- Offering employment benefits in exchange for sexual favors.
- Making or threatening reprisals after a negative response to sexual advances.
- Leering, making sexual gestures, or displaying of sexually suggestive objects, pictures, cartoons, or posters.
- Making or using derogatory comments, epithets, slurs, or jokes.
- Making verbal commentaries about an individual's body.
- Using sexually degrading words used to describe an individual.
- Sending suggestive or obscene letters, notes, communications or invitations.
- Touching, assaulting, impeding or blocking movements or violating someone's "personal space."
- Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitute harassment when: (1) submission to such conduct is made either explicitly or implicitly a term or condition of employment or reward; (2) submission to or rejection of the conduct is used as a basis for making educational, academic, or employment decisions; or, (3) the conduct has the purpose or effect of interfering with educational, academic, or employment performance or creating an intimidating, hostile, or offensive educational, academic, or employment environment.

Responsibilities

All College employees and students are responsible for creating an atmosphere free of discrimination or harassment, sexual or otherwise. Further, all College employees and students are responsible for respecting the rights of all members of the College community. Any student who experiences or witnesses any sexual or other unlawful harassment or discrimination in the College environment should promptly report the behavior to the Vice President of Student Success. If the Dean of Students is unavailable, the student should promptly contact the Human Resources Office. Reports should be made, in writing, within sixty working days of the incident. This policy applies to all incidents of alleged discrimination or harassment, including those occurring off-campus or during off-hours, when the alleged offender has a relationship with the College.

Investigation

All allegations of sexual or other harassment will be quickly and discreetly investigated and kept confidential to the maximum extent possible. All students have a duty to cooperate fully with the College in connection with any such investigation. If NWF State College determines that an employee or student is guilty of discriminating against or harassing another individual, appropriate disciplinary action will be taken against the offending employee or student, up to and including termination of employment, suspension, or expulsion.

Retaliation

NWF State College prohibits any form of retaliation against any student or employee for filing a bona fide complaint under this policy or for assisting in a complaint investigation. However, if after investigating any complaint of harassment or unlawful discrimination, the College determines that the complaint is not bona fide and was not made in good faith or that a student has provided false information regarding the complaint, disciplinary action may be taken against the individual who filed the complaint or gave false information.

Office of the Student Ombudsman

Per Florida Statute 1006.51, NWF State College provides a Student Ombudsman with whom students may confidentially discuss complaints, concerns, or problems to reach an informal consensus before proceeding with official college processes. The Director of Student Life on the Niceville Campus will serve as the Student Ombudsman and may be contacted at 850-729-5277 or ombudsman@nwfsc.edu.

Student Grievance Procedures

Student grievances fall into two categories: academic and all other. While the grievance process is similar for both, different college offices are responsible for each category. NWF State College prohibits any form of retaliation against any student filing a grievance, academic or non-academic.

Academic Grievances

Academic grievances must be initiated within 30 days of the incident being grieved. If a student believes that he or she has not been graded fairly in a course, a grievance may be filed. The grade grievance process applies only to final course grades.

Academic Grievance Process

The student should submit the grievance in writing by completing the Grievance form located at http://www.nwfsc.edu/disputes/.

Non-Academic Grievances

Non-Academic grievances must be initiated within 30 days of the incident being grieved. These procedures apply to all non-academic student grievances, including those alleging discrimination and harassment.

Informal Non-Academic Grievance Process

The student should first request a conference with the Vice President of Student Success. The Vice President will attempt to resolve the grievance informally to the satisfaction of the student. If the issue is not resolved the student may proceed to the formal grievance process.

Formal Non-Academic Grievance Process

The Dean will conduct an adequate, reliable, and impartial investigation of the complaint and render a decision. The Dean of Students may refer the matter to an ad hoc hearing committee to assist in evaluating the complaint. The student will be notified of the response to his or her grievance and the basis for that decision within 10 business days. The student may also appeal the decision of the Dean by requesting a formal hearing (see Student Due Process) conducted by the Judicial Council.

Student Code of Conduct

College students are citizens of the local, state, and national governments and of the academic community and are therefore expected to conduct themselves as law abiding members of each community at all times. Admission to the College carries with it special privileges and imparts special responsibilities apart from those rights and duties enjoyed by non-students. In recognition of the special relationship that exists between the College and the community it seeks to serve, the Northwest Florida State College Board of Trustees has authorized the President of the College to take such action that may be necessary to maintain campus safety and preserve the integrity of the College and its educational environment.

Pursuant to this authorization, the College has developed the following regulations, which are intended to govern student conduct on the campus. The College may enforce its own regulations regardless of any proceedings instituted by other authorities. Conversely, violation of any section of these regulations may subject a student to disciplinary measures by the College whether or not such conduct is simultaneously in violation of local, state, or national laws. When a student fails to abide by the rules and regulations of the College or fails to obey the ordinance of local, state, and national governments, disciplinary action may be taken.

Student Disciplinary Offenses

For the purpose of these regulations, a "student" shall mean any person who is registered for study at the College for any academic period. Generally, through appropriate due process procedures, College disciplinary measures shall be imposed for conduct which adversely affects the College's pursuit of its educational objectives, which violates or shows a disregard for the rights of other members of the academic community, or which endangers property or person at the College or on any College controlled property.

All police officers have been given the authority to control access and to patrol facilities. Failure to leave after instruction to do so can result in trespassing charges. Individual, group, or organizational misconduct, which is subject to disciplinary sanctions, shall include but not be limited to the following offenses:

Academic Offenses

- **Academic dishonesty:** Students are expected to conduct themselves as responsible members of the academic community and to be honest and forthright in their academic endeavors. Academic dishonesty may include but is not limited to:
    - **Cheating**: During any academic evaluation activity, the use or attempted use of unauthorized materials, information, notes, study aids or other devices, information from another student or student's paper. During any academic evaluation activity, engaging in unauthorized communication of information, including collaborating, contrary to the requirements of a course.
    - **Plagiarism**: Presenting work in part or whole of another as one's own without proper acknowledgment of the source or sources. The sole exception to the requirement of acknowledging sources occurs when ideas or information are common knowledge.

Non-Academic Offenses

- **Aiding and abetting the commission of offenses**: Any attempt to commit any of the foregoing offenses or the aiding and abetting of the commission of any of the foregoing offenses (an "attempt" to commit an

offense is defined as the intention to commit an offense coupled with the taking of some action toward its commission).

- **Alcoholic beverages:** The unauthorized use and or possession of alcoholic beverages on the College campus, or at any College sponsored event, except College events where alcoholic beverages are provided by the College.
- **Bullying:** Systematically and chronically inflicting physical hurt or psychological distress on one or more students. Bullying is further defined as unwanted and repeated written, verbal, or physical behavior, including any threatening, insulting or dehumanizing gesture by a student that is severe or pervasive enough to create an intimidating, hostile, or offensive educational environment, cause discomfort or humiliation, or unreasonably interfere with an individual's educational experience.
    - **Bullying includes**: Teasing; social exclusion; threat; intimidation; stalking; physical violence; theft; sexual, religious or racial harassment; public or private humiliation; and/or destruction of property.
    - **Cyberbullying**: Bullying, through the use of technology or any electronic communication, includes, but is not limited to, transfer of signs, signals, writing, images, sounds, data or intelligence of any nature transmitted in photo-optical systems, email, internet, webpages, instant messages, facsimile, social networking and/or phone. Bullying is created by the transmission of electronic content which is communicated and posted to more than one person that interferes with the orderly operation of the educational environment.
- **Classroom misconduct:** Classroom misconduct includes direct or indirect disruptive, threatening, or otherwise unacceptable social behavior in the classroom. Engaging in or assisting with such activity is prohibited. The instructor has the primary responsibility for control over classroom behavior and maintenance of academic integrity and can order any student engaged in disruptive conduct or conduct that violates the general rules and regulations of the College to be temporarily removed or expelled from the classroom.
- **Dangerous conduct:** Any conduct that constitutes a serious danger to any person's health, safety, or personal well-being, including any physical or immediate threat to others.
- **Dating violence, domestic violence, sexual assault, or stalking:** A type of abuse or violence where there is a pattern of controlling behaviors that one person is used to establish power over an intimate partner in order to control actions and activities. One can experience trauma where abusive relationships can increase in danger, or dangerous situations where students would not feel safe or secure. Actions include disrespectful and hurtful behaviors that one intimate partner may use against another partner, causing a partner physically harm, stalking, threating, isolating, gesturing and/or demanding unwanted sex practices.
- **Disorderly conduct or language:** Any individual or group behavior or language which is abusive, obscene, lewd, indecent, violent, excessively noisy, disorderly, or which unreasonably disturbs other groups or individuals.
- **Drugs**: The unlawful possession or use of any drug or controlled substance, including any stimulant, depressant, narcotic, hallucinogenic drug or substance, marijuana, or sale or distribution of any such drug or controlled substance on college owned or controlled property or at any college sponsored activity.
- **Explosives, fireworks, and flammable materials:** The unauthorized possession, ignition, or detonation of any object or article, that would cause damage by fire or other means to persons or property.
- **Failure to cooperate with College officials:** Failure to comply with directions of College officials acting in the performance of their duties.
- **Financial misconduct:** Conduct, including but not limited to, knowingly passing forms of payment such as a worthless check, debit, credit card, or money order in payment to the College community.
- **Firearms/Weapons:** Possesion, other than legally and securely stored in your vehicle, or use of firearms or other dangerous weapons at any college location or activity except by authorized law enforcement officers in the performance of their duties is prohibited behavior and will subject the offender to disciplinary procedures as well as as appropriate action by civil authorities.
- **Gambling**: Gambling in any form.
- **Harassment**: Any act of harassment by an individual or group against a student, college employee, campus group, visitor, or guest. Harassment shall include, but not be limited to, insults, heckling, verbal abuse,

threats of physical abuse, unwanted suggestions of a sexual nature, repeated teasing or annoyance of another, or other actions intended to disturb others.

- **Hazing:** Hazing is any intentional or reckless act, on or off the property of the College, by students acting alone, or with others, involving any action which is directed against any other students that endangers the mental or physical health or safety of that student, or which induces or coerces a student to endanger such student's mental or physical health or safety. For the purpose of this statement, hazing is defined as those actions taken and situations created in connection with initiation into or affiliation with any organization.
- **Inappropriate dress:** College students are mature enough to make wise and appropriate decisions on the type of apparel suitable for a college campus. Attire that disrupts the learning process is not allowed. Dress that includes any words or images that are obscene, offensive, or tend to promote violence, drugs or disrespect is prohibited.
- **Misuse of documents or identification cards:** Any forgery, alteration of, or unauthorized use of College documents, forms, records, or identification cards including information collected in connection with a student's admission, enrollment, financial transactions, or status in the College.
- **Obstruction of or interference with College activities or facilities:** Any intentional interference with or obstruction of any College activity, program, event, or facilities including the following:
    - Unauthorized occupancy of the College, College controlled facilities, or blockage of access to or from such facilities.
    - Interference with the right of way of any college member or other authorized person to gain access to the College or College controlled activity, program, event, or facilities.
    - Obstruction or delay of a campus security officer, fire/rescue service, or any College official in the performance of his/her duty.
    - Acts of misuse, vandalism, malicious or unwarranted damage or destruction, defacing, disfiguring, or unauthorized use of property belonging to the College including but not limited to: fire alarms, fire equipment, elevators, telephones, College keys, library materials, and/or safety devices; and any such act against a member of the College community or a guest of the College.
- **Theft**: Unauthorized possession or sale of College property
- **Unacceptable conduct at a College hearing:** Any conduct at any College hearing involving contemptuous, disrespectful, or disorderly behavior or false testimony or other evidence at any hearing.
- **Violations of general rules and regulations:** Any violation of the general rules and regulations of the College as published in an official College publication, including the intentional failure to perform any required action or the intentional performance of any prohibited action.
- **Violations of state or federal laws:** Any violation of state or federal laws or regulations proscribing conduct or establishing offenses.

Disciplinary Procedures

Disciplinary offenses fall into two categories: academic and all others. While the procedures are similar for both, different college offices are responsible each category. The Dean of Students and/or the Vice President for Academic Affairs, if the offense is academic in nature, are responsible for enforcement of student disciplinary policies and procedures, and will, in the pursuit of that responsibility, observe the proper aim of discipline, observe due process procedure, consider all evidence, determine the facts, render a decision, and impose appropriate disciplinary sanctions when a student has been charged with violation of College rules and/or regulations. Ultimately the President has responsibility and oversight of student disciplinary procedures, processes, and sanctions.

Disciplinary Process

Conference: The Vice President of Student Success, Vice President of Teaching and Learning, or designee, hereafter referred to as the "Administrator", shall request a meeting with the student for a preliminary conference where the student shall be apprised of his/her basic rights and made aware of the student due process procedures.

The student will be extended the opportunity to explain the conduct in question and provide the Administrator with a detailed written explanation. Failure of the student to meet with the Administrator within 10 days of the request for a meeting will not prevent the process of collecting information or the decision to move forward.

Investigation: The Administrator shall consider all evidence, determine the facts, render a decision, and impose disciplinary sanction(s) as necessary.

Sanctions: The Administrator will, in writing, identify the claimed misconduct, infraction or offense and present a statement of the full penalty or sanction, in addition to a statement of the student's right to due process. The student shall be provided this information either in person or by college email and registered mail.

Disciplinary Sanctions

Upon determination that a student or organization has violated any of the rules, regulations, or disciplinary offenses set forth in College policy, the Administrator may impose the following disciplinary sanctions either singly or in combination.

- **Warning**: The appropriate College officials may notify the student that continuation or repetition of specified conduct may be cause for other disciplinary action.
- **Reprimand**: A written reprimand or censure may be given any student or organization whose conduct violates any part of these regulations. Such a reprimand does not restrict the student in any way, but does have important consequences. It signifies that he or she is in effect being given another chance to conduct himself or herself as a proper member of the College community and that any further violation may result in more serious penalties.
- **Restitution**: A student who has committed an offense against property may be required to reimburse the College or other owner for damage to or misappropriation of such property. Any such payment in restitution shall be limited to cost of repair or placement.
- **Restrictions**: Restrictions upon a student or organization's privileges for a period of time may be imposed. These restrictions may include, for example, denial of the right to represent the College in any way, denial of use of facilities, parking privileges, participation in extracurricular activities, or restriction of organizational privileges.
- **Disciplinary Probation:** Continued enrollment of a student on probation may be conditioned upon or adherence to these regulations. Any student placed on probation will be notified of such in writing and will also be notified of the terms and length of probation. Probation may include restrictions upon the extracurricular activities of a student. Any conduct in violation of these regulations while on probationary status may result in the imposition of a more serious disciplinary action.
- **Suspension**: If a student is suspended, he or she is separated from the College for a stated period of time with conditions of readmission to the College. Student must appeal for reinstatement.
- **Expulsion**: Permanent removal and exclusion from the College, College controlled facilities, programs, events, and activities.
- **Dismissal:** The dismissal of a student whose character and behavior prove unsatisfactory for a period up to two years.

Some disciplinary actions must adhere to additional state, federal, or organizational and accrediting agency guidelines and regulations. Immediate sanctions, up to and including expulsion, or dismissal may be necessary in some cases to guarantee the safety and harmony of the college environment. To provide and protect a safe learning environment, the College reserves the right to invoke immediate sanctions based upon the nature and seriousness of the offense. At this point, the student is able to request a final appeal to the President.

Due Process

Northwest Florida State College recognizes that occasionally issues arise between members of the college community. When such instances occur the college encourages the parties to attempt to reconcile their differences

informally between themselves. If the informal approach doesn't render an acceptable solution or an aggrieved isn't comfortable with the informal approach then the following procedures must be utilized to notify the college of an "official" grievance.

All "informal" efforts noted above are not recorded and will not exist in college records. The process outlined below is the only means an individual has to notify the college of a grievance. Grievances must be submitted to the college within 30 days of the aggrieved becoming aware of the grievance (except for isisues that have a defined timeline outlined by governmental administrative procedure or state/federal statute.) The form must be completed and submitted by the grievant to initiate action by the college. When a grievance is submitted through this system the person completing the form will receive an automated acknowledgment with a receipt number. Please keep the receipt for your reference and reference it when contacting the college concerning your complaint.

The following procedures will be utilized in the case of a grievance or a disciplinary offense.

Formal Grievance Investigation Procedure (Step 1)

- Individuals wishing to file a grievance with the college must do so by completing the Grievance form located at http://www.nwfsc.edu/disputes/. Once filed, the grievance will be assigned to a college administrator for investigation. Grievances may be filed for academic issues, potential violations of college policies or procedures, or potential violations of Title VII or Title IX. Any grievance filed concerning criminal issues will be referred to law enforcement and when required by the Clery Act or Title IX the school will initiate a parallel investigation into the incident.
- The individual filing the grievance must identify the following points in their submission:
    - College faculty member or college department that initiated the initial action of concern.
    - Identify the action taken by the person or college department that is being grieved.
    - Identify why the action taken by the person or college department is factually flawed or contrary to federal law, state law or college policy or practice.
    - Desired outcome of the grievance.
    - If the actions taken by the college faculty member or college department resulted in sanctions, and the individual filing the grievance wishes for the sanctions to be suspended during the step 1 process the individual filing must provide justification for the request.
- The administrator will issue a notice of investigation to the individual(s) being investigated, if applicable. The notice will include a summary of the incident and possible violations, as know at the time, being investigated. The individual(s) will be notified via college email.
- The administrator may, for safety reasons, issue temporary sanctions or accommodations, as appropriate, during the investigation.
- The administrator will meet with the appropriate parties to collect the facts of incident.
- Once all known facts of the incident have been collected the administrator will consider the details and render a decision. All decisions will be based on a "beyond a reasonable doubt" standard.
- The administrator will notify the individual(s) of the decision. If the individual is found "responsible" for the incident sanctions will be applied.
- If the administrator denies the appeal and determines that the sanctions issued by the original college employee or college department are insufficient, the administrator may expand the sanctions on behalf of the college.
- The individual will be notified of the decision and sanctions (if appropriate) via school email.
- In the case of Title VII and Title IX violations the "victim" of the incident will also be notified of the decision and sanctions rendered on the accused.

Grievance Appeal Procedures (Step 2)

- Step 2 appeal must be filed within 10 calendar days of the issuance of the Step 1 finding. This is accomplished by the individual filing their intent by completing the on-line appeal form located

at http://www.nwfsc.edu/disputes/. During the appeal process the sanctions issued in Step 1 will stand. In the case of Title VII and Title IX issues the "victim" of the violation may initiate the appeal process if they do not concur with the decision of the administrator in Step 1.

- Step 2 grievance may be filed if the individual filing the grievance believes there was an error or omission of fact or law considered by the administrator in Step 1.
- The individual filing the grievance must identify the following points in their submission:
    - Administrator who conducted the step 1 grievance.
    - Identify the outcome that the administrator issued as a result of Step 1.
    - Identify why the out outcome issued by the administrator is factually flawed or contrary to federal law, state law or college policy or practice.
    - Desired outcome of the grievance.
    - If the step 1 grievance resulted in sanctions and the individual filing the grievance wishes for the sanctions to be suspended during the step 2 process the individual filing must provide justification for the request. The VP of Academic Affairs (or designee) will be the sole arbiter of this request.
- Upon review by the VP of Academic Affairs (or designee) the VP may return the appeal back to the individual if it is determined the appeal was not based on a factual matter or for clarification. The VP of Academic Affairs (or designee) will be the sole arbiter of the validity of the request. This decision will be allowed to be appealed by filing a Step 3 appeal.
- The individual filing the appeal has a right to the factual data and documents used in the decision of Step 1 and must state his/her request in the Step 2 appeal. The individual is not entitled to the investigative notes of the Administrator in Step 1. Any information protected by the Family Education Rights and Privacy Act (FERPA) or non-critical academic information will be redacted.
- Step 2 Appeal will be heard by a panel of:
    - Two full-time college employees (faculty members, from a different department, if the incident is academic in nature)
    - One full-time Student Affairs employee
    - Two students (from an academic program other than the student filing the appeal, if appropriate.)
    - The panel will be chaired by an administrator assigned by the VP of Academic Affairs who will be a non-voting member and serve as the recorder of the hearing.
- Individuals filing the appeal will be notified of the date, time and location of the hearing in writing via college email. This notification will occur a minimum of 10 calendar days prior to the hearing.
- The individual filing the appeal must represent him/herself at the hearing unless the assistance of a representative is required by law.
- The college will be represented by the Administrator in Step 1.
- Only persons directly involved in the cases, panel members, administration representative, the filing individual, and persons giving testimony will be allowed in the proceedings.
- Persons giving testimony will only be allowed in the proceedings while testifying.
- Audio and visual recording devices are not allowed in the proceedings.
- The chair will provide a summary of the "case" as it exists, including the Step 1 outcome for all involved.
- The individual and the administrator will present "their" case, including the presentation of evidence and witnesses. The individual will present first followed by the administrator. At the conclusion of each presentation, the other party may provide a rebuttal to the evidence or testimony presented.
- Once the presentations are completed closing statements may be made by the individual and administrator (in order.) The closing statement must only be a summation of the case.
- In closed session the panel will consider the evidence and testimony and decide, on a majority vote, to affirm the Step 1 decision or overturn the Step 1 decision based on the documented basis of the appeal. All decisions must be based on a "beyond a reasonable doubt" standard.
- If the panel decides to affirm the appeal the panel may:
    - Alter the findings and/or sanctions in Step 1.
    - Refer the investigation back to the Step 1 administrator for continued investigation. Note: if this option is selected the process is considered to be back at the Step 1 investigation and the individual still has the full appeals option available when the revised findings are published.

- The individual will be notified of the decision via their college email.

Grievance Appeal Procedures (Step 3)

- Step 3 appeal must be filed within 10 calendar days of the issuance of the Step 2 finding. This is accomplished by the individual filing their intent with the completion of the on-line appeal form located at http://www.nwfsc.edu/disputes/. During the appeal process the sanctions issued/affirmed in Step 2 will stand.
- The VP Academic Affairs (or designee) will be the sole arbiter of this request. In the case of Title VII and Title IX issue the "victim" of the violation may initiate the grievance process if they do not concur with the decision of the panel in Step 2.
- Step 3 grievance may be filed if the individual filing the grievance believes there was an error or omission of fact or law considered by the panel in Step 2.
- The individual filing the grievance must identify the following points in their submission:
    - Identify the outcome that the panel issued as a result of Step 2.
    - Identify why the outcome issued by the panel is factually flawed or contrary to federal law, state law or college policy or practice.
    - Desired outcome of the grievance.
    - If the step 2 grievance resulted in sanctions and the individual filing the grievance wishes for the sanctions to be suspended during the step 3 process, the individual filing must provide justification for the request.
- Upon review by the VP Academic Affairs (or designee) the request may be returned back to the individual if it is determined the appeal was not based on a factual matter or for clarification. The VP Academic Affairs (or designee) will be the arbiter of the validity of the request.
- The VP Academic Affairs (or designee) will conduct an investigation and render a final decision. The VP Academic Affairs (or designee) may or may not meet with the individual, witnesses or others.
- The VP Academic Affairs (or designee) will consider the evidence and testimony and decide to affirm the Step 2 decision or overturn the Step 2 decision based on the documented basis of the appeal. All decisions must be based on a "beyond a reasonable doubt" standard.
- The VP Academic Affairs (or designee) will:
    - Affirm the Step 2 decision and may alter the findings and/or sanctions in Step 2, OR
    - Affirm the Step 3 appeal and overturn the Step 2 decision.
- The individual will be notified of the Step 3 decision via college email.
- The step 3 grievance is the final step in the college's grievance process.

All Programs

Active NWF Programs with State and Fed CIP 2019-03-12

AA - Associate in Arts General Degree

Admission Program Objective Code AAGD
State CIP Code 1192401010

The AA is primarily intended as a transfer degree for students continuing to a 4 year bachelor's program at a university or state college. The AA Transfer Programs indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed.

Associate in Arts students must complete 60 college credits to complete the degree; 36 of these credits must be general education credits distributed across five subject area categories. A student must satisfy the required number of credits in each category. The remaining 24 elective credits should be selected in consultation with an advisor, who will assist with selecting the college credits most advantageous to the student's educational goals.

General Education

In consultation with an advisor, choose appropriate General Education courses that fulfill your AA Degree Concentration for University Transfer Major. Select courses from each area as listed below; see the AA Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- ____ ____ - Core Mathematics **3 Credit Hours**
- ____ ____ - General or Core Mathematics **3 Credit Hours**
- ____ ____ - Biological Sciences **3 Credit Hours****
- ____ ____ - Physical Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours*****
- ____ ____ - History/Government Social Sciences **3 Credit Hours*****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

*** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

AA Elective Requirements

In consultation with an advisor, select appropriate AA degree college credit electives that fulfull your AA Degree Concentration for University Transfer Major:

- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**

Total Elective Credits Required: 24

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

AA General Degree (AA) (AAGD)
First Year
Fall Semester Core Mathematics **- 3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Core Humanities **- 3 Credit Hours** Elective **- 3 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Spring Semester Core or General Mathematics **- 3 Credit Hours** ENC 1102 - English Composition II **3 Credit Hours ¶**

Core or General Humanities **- 3 Credit Hours** Elective **- 3 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester Biological Science* **- 4 Credit Hours** Behavioral Social Science** **- 3 Credit Hours** Elective **- 3 Credit Hours** Elective **- 3 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 16**
Spring Semester Physical Science* **- 4 Credit Hours** History/Government Social Science** **- 3 Credit Hours** Elective or Additional General Education Hours*** **- 4 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 60
* At least one Science course must come from the core. ** At least one Social Science course must come from the core. *** Students who have already satisfied the 36 hour General Education requirement may take a general Elective.

AA Degree Checklist:

- Have you completed a minimum of 60 credit hours in the following areas?
    - 36 Hours of General Education
        - 6 hours in Communications ("C" or better)
        - 6 hours in Mathematics ("C" or better)
        - 6 hours in Humanities ("C" or better)
        - 8 hours in Natural Science
        - 6 hours in Social Sciences ("C" or better in History/Government Social Science category)

        - 4 hours in Additional General Education Credits (if needed)
    - 24 hours of college credit A.A. transferable electives
- Have you completed at least 15 of the 60 credits at NWF State College?
- Have you completed the foreign language requirement?
- Have you met the minimum 2.0 GPA requirements for the A.A.?
- Have you met the Civic Literacy Competency requirement for the A.A?
- Have you applied for graduation by the advertised deadline?

AA Degree General Education Requirements

Associate in Arts students must complete 60 college credits to complete the degree; 36 of these credits must be general education credits distributed across five subject area categories. A student must satisfy the required number of credits in each category. The remaining 24 elective credits should be selected in consultation with an advisor, who will assist with selecting the college credits most advantageous to the student's educational goals.

To assure that graduates of the state university and state college systems share a common base of General Education requirements, the State of Florida has designated general education core course options in each of five areas of study—Communication, Humanities, Mathematics, Natural Sciences, and Social Sciences. Beginning with students initially entering a Florida College System institution or state university in 2015-2016 and thereafter, each student must complete at least one identified core course (designated with ♦) in each area of study as part of the general education course requirements. Furthermore, NWF State College has embedded the core competencies of speaking, writing, and technology in both the AA and AS programs of study; by program design, all AA and AS graduates take courses that allow them to demonstrate their abilities in these important life skills.

AA General Education Requirements

Communications: 6

Students will demonstrate the ability to communicate effectively.

Students will demonstrate the ability to analyze communication critically.

A minimum grade of "C" in each Communications course is required for general education credit.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

♦ Core General Education
▲ Technology-Across-the Curriculum
¶ Writing requirements

Humanities: 6

Students will confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.

Students will acquire competence in reflecting critically upon the human condition.

A minimum grade of "C" in each Humanities course is required for general education credit.

- Choose one Core Humanities course and one General Humanities course, or
- Choose two Core Humanities courses.

Core Humanities

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

♦ Core General Education
† Speaking-Across-the Curriculum
❖ International and/or diversity focus
¶ Writing requirements

General Humanities

AML 2010 - American Literature I

3 Credit Hours ¶
(Fall)

A course in American Literature from the pre-Colonial period to the Civil War. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2020 - American Literature II

3 Credit Hours ¶
(Spring)

A course in American Literature from Civil War to present. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: AML 2010 is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2060 - Architecture History

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in architecture from prehistoric to modern times. Architecture will be considered in terms of stylistic qualities, structural type, and intended usage. Topics will be addressed according to historical content, societal background, and geographical location. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2250 - Humanities – A Contemporary Perspective

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

This course is an integrated study of the artistic, cultural, philosophic, religious, social, and technological influences that shape modern western cultures in the modern era. The focus will begin with the 20th century and follow, chronologically, the issues of the modern era. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2700 - Humanities – Foreign Study

3 Credit Hours ❖ ¶
(Offered as needed)

A variable humanities content course designed to allow students first-hand learning experiences outside the United States. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2100 - World Literature I

3 Credit Hours ❖ ¶
(Fall)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from antiquity through the Renaissance, that reflect cultural and intellectual heritage. May be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet the Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2120 - World Literature II

3 Credit Hours ❖ ¶
(Spring)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from the Renaissance to the present, that reflect cultural and intellectual heritage. May be used as a humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: LIT 2100 is not a prerequisite for this course)

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

REL 2300 - Introduction to World Religions

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

This course will explore the principles and practices of the world's major religious traditions. The religions will be studied in their historical and contemporary forms. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2071 - Humanities – Cinema Appreciation

3 Credit Hours † ¶
(Fall, Spring, Summer)

An introduction to the origin, development, cultural aspects and analysis of cinema topics. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2300 - Dramatic Literature

3 Credit Hours † ¶
(Fall, Spring)

Survey of dramatic works from the Greeks to the 20th century, with emphasis on the plays of the 19th and 20th centuries; intensive investigation and script analysis with reports, lectures and discussions. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

† Speaking-Across-the Curriculum
❖ International and/or diversity focus
¶ Writing requirements

Mathematics: 6

Students will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

All Mathematics courses listed below meet Mathematics requirements outlined in FAC Rule 6A-10.030.

A minimum grade of "C" in each Mathematics course is required for general education credit.

- Choose one Core Mathematics course and one General Mathematics course, or
- Choose two Core Mathematics courses.

(Any student who successfully completes a Mathematics course for which one of the general education core

course options in Mathematics is an immediate prerequisite shall be considered to have completed the Mathematics core.)

Core Mathematics

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites. Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following: (1) 114 or higher on the math section of the PERT OR

(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ♦ **Core General Education**

General Mathematics

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of

“C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and

planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAS 2103 - Linear Algebra

3 Credit Hours
(Offered as needed)

This is an introductory course in Linear Algebra intended to give students enough insight to enable successful pursuit of more abstract mathematics courses. This course includes the study of matrices and systems of equations, determinants, vector spaces, linear transformations, orthogonality, eigenvalues, and eigenvectors. Exercises using MATLAB will be required. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade or “C” or better, or equivalent.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel

and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

Natural Sciences: 6

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world.

- Choose one Biological Science course and one Physical Science course.
  At least one course must be a Core Natural Science course indicated by the ♦ symbol.

  (Any student who successfully completes a Science course for which one of the general education core course options in Science is an immediate prerequisite shall be considered to have completed the Science core.)

Biological Sciences

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

- ♦ **Core General Education**

Physical Sciences

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AST 1005 - Introduction to Astrobiology

3 Credit Hours
(Spring)

This course will explore the scientific evidence for the possibility, probability, and potential nature of life that might exist beyond the Earth. Contemporary discoveries about current and past conditions suitable for the origin of life on Mars and some of the moons orbiting other planets in our own solar system are reviewed in the context of what we understand about life on Earth. The question of life in other solar systems is also covered. Space travel and problems regarding intelligent extra-terrestrial beings visiting the Earth and intelligent life beyond the Earth but still within our own solar system are also discussed. All this is done in a fashion which integrates the various branches of science required to understand life beyond the Earth: Astronomy, Biology, Chemistry, Geology, and Physics. There are no prerequisites for this course and it may be taught in a team fashion by faculty members from various scientific disciplines.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth’s interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

ISC 1003 - Natural Disasters – Causes, Consequences, Human Response

3 Credit Hours
(Fall, Spring, Summer)

This interdisciplinary course investigates natural catastrophic events, such as earthquakes, volcanic eruptions,

tsunamis, hurricanes and floods. This class will use an environmental studies approach to examine how modern society exacerbates the damage caused by these natural phenomena and methods to mitigate human suffering. The student will gain an appreciation of humankind's relationship to the natural environment.

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

OCE 1013C - Aquatic Environmental Science

4 Credit Hours
(Offered as needed)

This course will investigate living and non-living components of aquatic ecosystems. Students will learn how aquatic ecosystems function naturally as well as how human activity can alter these ecosystems. The course is built around field trip(s) and lab work during which students will obtain water quality data from a local aquatic environment. Through field trip(s) and lab work, students will gain appreciation for the local relevance of course material. For both majors and non-majors, a key outcome of such experiences will be gaining experience in using inquiry and reasoning through the scientific method and becoming comfortable with data, technology, and instrumentation. Problem-solving, interpretation of data, and class discussions will be key.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- ♦ **Core General Education**

Social Sciences: 6

Students will demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Students will demonstrate an understanding of basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues, past and present, local and global.

- Choose one Behavioral Social Science course and one History/Government Social Science.
  At least one course must be a Core Social Science course indicated by the ♦ symbol, or
- Choose two History/Government Social Sciences courses.
  At least one course must be a Core Social Science course indicated by the ♦ symbol.

Behavioral Social Sciences

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ANT 2100 - Introduction to Archaeology

3 Credit Hours ❖
(Offered as needed)

Introduction to the fundamental principles, methods, and theories in archaeology. Includes a history of the development of archaeology, and examination of the nature of archaeological data and research, an introduction to archaeological data and analysis, and an examination of approaches to synthesis and interpretation. North and South American archeology is studied, but non-western examples are also studied to enhance an understanding of the development of the discipline in Europe and the Americas.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ♦ **Core General Education**
- ❖ **International and/or diversity focus**

History/Government Social Sciences

A minimum grade of "C" in each History/Government Social Science course is required for general education credit.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1012 - World Civilization I

3 Credit Hours ❖ ¶
(Fall)

A study of world history from 4000 BC to 1650 AD as it relates to the development of western civilization. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading

achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1022 - World Civilization II

3 Credit Hours ❖ ¶
(Spring)

A study of history from 1650 AD to the present as it relates to the development of the modern world. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ♦ **Core General Education**
- ❖ **International and/or diversity focus**
- ¶ **Writing requirements**

Additional General Education Credits: 6

Additional General Education Credits should be selected in alignment with a student's choice of transfer major. Any general education hours over a total of 36 will apply as electives in the AA degree. Consult with an academic advisor for assistance.

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

- ___ ____ - Any A.A. General Education Communications, Mathematics, Humanities, Natural Science, or Social Science course
  - ♦ **Core General Education**
  - **† Speaking-Across-the Curriculum**
  - **▲ Technology-Across-the Curriculum**
  - ❖ I**nternational and/or diversity focus**

Total AA General Education Credits Required: 36

Footnote Legend

Symbol	Description
♦	Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
▲	Courses listed with this symbol address NWF State College's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.
†	Courses listed with this symbol address NWF State College's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
❖	Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶	Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Degree Checklist:

- Have you completed a minimum of 60 credit hours in the following areas?
  - 36 Hours of General Education
    - 6 hours in Communications ("C" or better)
    - 6 hours in Mathematics ("C" or better)
    - 6 hours in Humanities ("C" or better)
    - 6 hours in Natural Science
    - 6 hours in Social Sciences ("C" or better in History/Government Social Science category)
    - 6 hours in Additional General Education Credits (if needed)
  - 24 hours of college credit A.A. transferable electives
- Have you completed at least 15 of the 60 credits at NWF State College?
- Have you completed the foreign language requirement?
- Have you met the minimum 2.0 GPA requirements for the A.A.?
- Have you met the Civic Literacy Competency requirement for the A.A?
- Have you applied for graduation by the advertised deadline?

AA Transfer Major: Accounting

Admission Program Objective Code: ACCO
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, IRSC, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520301
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Actuarial Science

Admission Program Objective Code: ACTU
State CIP Code: 1192401010

Offered at FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Advertising

Admission Program Objective Code: ADVE
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090903
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Aerospace Engineering

Admission Program Objective Code: AERO
State CIP Code: 1192401010

Offered at UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: African-American (Black) Studies

Admission Program Objective Code: AFRI
State CIP Code: 1192401010

Offered at FAMU, FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Agricultural (Food & Resource) Economics

Admission Program Objective Code: AGRI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Agricultural Engineering

Admission Program Objective Code: AGRE
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Agricultural Teacher Education (Vocational)

Admission Program Objective Code: AGTE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Agriculture Science

Admission Program Objective Code: AGRS
State CIP Code: 1192401010

Offered at UFAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: American Studies (USA)

Admission Program Objective Code: AMER
State CIP Code: 1192401010

Offered at FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050102
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Anthropology

Admission Program Objective Code: ANTH
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Classes

- ANTXXXX - Any course with ANT prefix
- ANTXXXX - Any course with ANT prefix

AA Transfer Major: Applied Physiology and Kinesiology

Admission Program Objective Code: APPK
State CIP Code: 1192401010

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Offered at FSU, UF
Transfer Program CIP code: 260908
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Applied Science

Admission Program Objective Code: APPL
State CIP Code: 1192401010

Offered at FGCU, UCF, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Majors Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Architecture - FAMU/NWF Pre-Articulation Agreement

Admission Program Objective Code FAMU
State CIP Code 1192401010

Articulation Agreement with the Florida A&M University (FAMU) School of Architecture:

An articulation agreement between NWF State College and Florida A&M University (FAMU) School of Architecture allows students to earn an Associate in Arts (A.A.) degree that could qualify them for entrance to the upper-division of the Bachelor of Science in Architectural Studies degree program at FAMU. It is highly recommended that, in addition to the common prerequisites listed below, students should consult the current catalog from FAMU. Some SUS programs have restricted access or are considered Limited Access programs. Students are responsible for completing the specific requirements for admissions. For more information on the FAMU A.A. to B.S. articulation, contact Mr. Ray Rickman at 729-5218 or rickmanr@nwfsc.edu.

Associate in Arts Degree/Pre-Architecture FAMU Prerequisites

Please consult the Course Description section of the catalog for the required prerequisites of all courses needed to satisfy the requirements of this program. Students must meet NWFSC A.A. degree graduation requirements.

General Education

Undesignated courses are to be selected from the General Education Requirements listed in the AA Degree General Education Requirements section of catalog for specific courses.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is

a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

Total General Education Credits Required: 36

Program Electives

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of

systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

Total Program Elective Credits Required: 36

Total Articulation Program Credits Required: 72

AA Transfer Major: Art History & Appreciation

Admission Program Objective Code: ARTA
State CIP Code: 1192401010

Offered at FIU, FSU, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500703
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- XXXXXXX - Competency requirement for a single foreign language*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Art Teacher Education

Admission Program Objective Code: ARTT
State CIP Code: 1192401010

Offered at FIU, UCF, UF*, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131302
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of

design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.
or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Art, General

Admission Program Objective Code: ART
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, UCF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.
or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of

"C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARHXXX - Any course with ARH prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Asian Studies

Admission Program Objective Code: ASIA
State CIP Code: 1192401010

Offered at FIU, FSU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Astronomy

Admission Program Objective Code: ASTR
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Athletic Training

Admission Program Objective Code: ATHL
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510913
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Behavioral Healthcare

Admission Program Objective Code: BEHA
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biochemistry

Admission Program Objective Code: BICY
State CIP Code: 1192401010

Offered at FGCU, FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences - Interdisciplinary Natural Sciences

Admission Program Objective Code: BIOP
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 16/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Chemistry

Admission Program Objective Code: BICH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 1/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med,

and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Computer Science

Admission Program Objective Code: BICO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 2/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Earth Science

Admission Program Objective Code: BIEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 3/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Mathematics

Admission Program Objective Code: BIMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 4/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of

ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Physics

Admission Program Objective Code: BIPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 5/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med,

and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Computer Science

Admission Program Objective Code: CHCO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 6/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Earth Science

Admission Program Objective Code: CHEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 7/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Mathematics

Admission Program Objective Code: CHMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 8/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Physics

Admission Program Objective Code: CHPY
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 9/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer & Earth Sciences

Admission Program Objective Code: CMEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 10/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Math

Admission Program Objective Code: CMMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 11/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Physics

Admission Program Objective Code: CMPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 12/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Mathematics

Admission Program Objective Code: EAMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 13/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Physics

Admission Program Objective Code: EAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 14/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Mathematics & Physics

Admission Program Objective Code: MAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 15/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals

and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological/Biosystems Engineering

Admission Program Objective Code: BIBI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 144501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Biology, General

Admission Program Objective Code: BIOL
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, MDC, SPC, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biology, General - FSU - Teach

Admission Program Objective Code: BIOF
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biomedical Sciences

Admission Program Objective Code: BIMD
State CIP Code: 1192401010

Offered at FSCJ, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.
or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biomedical/Bioengineering

Admission Program Objective Code: BIEN
State CIP Code: 1192401010

Offered at FIU, FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biotechnology

Admission Program Objective Code: BITC
State CIP Code: 1192401010

Offered at FGSU, SFC, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Botany, General

Admission Program Objective Code: BOTA
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric

equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Business Administration

Admission Program Objective Code: BUSA
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business Administration & Management

Admission Program Objective Code: BUSM
State CIP Code: 1192401010

Offered at CC, FAMU, FAU, FGCU, FIU*, FSCJ, FSU*, IRSC, SPC, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Managerial Economics

Admission Program Objective Code: BMET
State CIP Code: 1192401010

Offered at UCF, UNF, USF*, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520601
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Marketing Management

Admission Program Objective Code: BMKT
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU*, FSU*, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521401
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Teacher Education/Business Technology Education

Admission Program Objective Code: BTEA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be

associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

- XXXXXXX - Elective in Business Administration*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business, General

Admission Program Objective Code: BUTN
State CIP Code: 1192401010

Offered at FSU*, UCF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Cardiopulmonary Science

Admission Program Objective Code: CARD
State CIP Code: 1192401010

Offered at FSWSC, VC*, FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510908
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- CGSX060 (required at FAMU only)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemical Engineering

Admission Program Objective Code: CHEN
State CIP Code: 1192401010

Offered at FIU, FAMU, FSU, USF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Chemical Sciences - Chemical Sciences

Admission Program Objective Code: CMSI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

AA Transfer Major: Chemical Sciences - FSU Teach

Admission Program Objective Code: CMST
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals

and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemistry

Admission Program Objective Code: CHEM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Chemistry Teacher Education

Admission Program Objective Code: CHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Civil Engineering

Admission Program Objective Code: CIVI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UNF, FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Communication and Media Studies

Admission Program Objective Code: COMS
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090199
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Communications (Mass), Media Studies or Converged Communications

Admission Program Objective Code: COMM
State CIP Code: 1192401010

Offered at FGCU, FSCJ, UCF, UNF, USFSP, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090102
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health

Admission Program Objective Code: COMH
State CIP Code: 1192401010

Offered at FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512208
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-

83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health Liaison

Admission Program Objective Code: CMHL
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

- STAXXXX - Any course with the STA prefix

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

AA Transfer Major: Computational Biology

Admission Program Objective Code: BICP
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 261104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

Transfer Major Physical Sciences Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computational Science

Admission Program Objective Code: CMPT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems,

mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

- BSCXXXXC - Any lab course with the BSC prefix
  or
- CHMXXXXC - Any lab course with the CHM prefix
  or
- GLYXXXXC - Any lab course with the GLY prefix
  or
- METXXXXC - Any lab course with the MET prefix
  or
- PHYXXXXC - Any lab course with the PHY prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science

Admission Program Objective Code: CMIN
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- Choose two science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)
  *See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science (FSU only)

Admission Program Objective Code: CFSU
State CIP Code: 1192401010

Offered at FSU*
Transfer Program CIP code: 110101, track 2/6

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Science (UNF only)

Admission Program Objective Code: CUNF
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Technology

Admission Program Objective Code: CIIT
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- An introductory object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SPCXXXX - Any course with the SPC prefix

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science- Information Systems

Admission Program Objective Code: CIS
State CIP Code: 1192401010

Offered at FAMU, UF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - High level programming language course*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

or

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Criminology

Admission Program Objective Code: CMCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430116
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- COP2XXX - Any computer programming course*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

AA Transfer Major: Computer Engineering - Computer & Information Engineering

Admission Program Objective Code: CMPE
State CIP Code: 1192401010

Offered at FAMU, FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Engineering - Computer Engineering

Admission Program Objective Code: CMEN
State CIP Code: 1192401010

Offered at FAMU, UF, FAU, FIU, FSU, UCF, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 1/3
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Networking (BAS)

Admission Program Objective Code: CNET
State CIP Code: 1192401010

Offered at FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110901
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Science - BA in Computer Science (Track 6/6) (FSU)

Admission Program Objective Code: CMSC
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 6/6
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computer Software & Media Applications

Admission Program Objective Code: CSFM
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Construction Engineering

Admission Program Objective Code: CONS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Criminal Justice Studies

Admission Program Objective Code: CRIM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, PSC, UCF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Criminology

Admission Program Objective Code: CRMO
State CIP Code: 1192401010

Offered at UF*, USF, USFSM, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Dental Hygiene (BAS)

Admission Program Objective Code: DEHY
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510602
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Dietetics/Nutritional Services

Admission Program Objective Code: DIET
State CIP Code: 1192401010

Offered at FIU*, FSU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Dietetics/Nutritional Services - Dietetics

Admission Program Objective Code: DIEN
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Digital Media

Admission Program Objective Code: DGMD
State CIP Code: 1192401010

Offered at FSCJ, GCSC, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 100304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

Associate in Arts Degree or Associate in Science Degree in Graphics, Design, Digital Media, Information Technology or related fields.

AA Transfer Major: Drama Education

Admission Program Objective Code: DRAM
State CIP Code: 1192401010

Offered at FAMU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Economics - Business

Admission Program Objective Code: ECOB
State CIP Code: 1192401010

Offered at FAMU, FAU, UF, UNF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet

are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Economics - Social Sciences

Admission Program Objective Code: ECON
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU*, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 1/2
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Education of Blind & Visually Handicapped

Admission Program Objective Code: EDBL
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131009
*See note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Education, General

Admission Program Objective Code: EDTR
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Educational Studies

Admission Program Objective Code: EDST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 139999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

NOTE: Completion of this program does not result in educator certification.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be

associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Electrical, Electronics Engineering

Admission Program Objective Code: ELEL
State CIP Code: 1192401010

Offered at UF, FAMU, FAU, FSU, UCF, UNF, USF, FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141001, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas,

volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Electronic Engineering Technology - Electrical & Computer Engineering Technology

Admission Program Objective Code: ELEC
State CIP Code: 1192401010

Offered at FAMU, VC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Elementary Teacher Education

Admission Program Objective Code: ELED
State CIP Code: 1192401010

Offered at CC, DSC, FAMU, FGCU, FSU*,FSWSC, NWFSC, PSC, SFSC, UCF, UF*, USF, USFSM, USFSP, UWF, FIU, FAU, SPC, IRSC, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131202
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Energy Technology Management (BAS)

Admission Program Objective Code: ENRG
State CIP Code: 1192401010

Offered at SCFMS

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Engineering Technology

Admission Program Objective Code: ENGN
State CIP Code: 1192401010

Offered at DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 159999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

AA Transfer Major: English Language and Literature

Admission Program Objective Code: ENLI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 230101
* See Note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: English Teacher Education

Admission Program Objective Code: ENTE
State CIP Code: 1192401010

Offered at CC, FAU, FSU, FSWSC, UCF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131305
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix
  or
- ENLXXXX - Any course with the ENL prefix

AA Transfer Major: Entomology

Admission Program Objective Code: ENTM
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260702
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric

equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Entrepreneurship

Admission Program Objective Code: ENTR
State CIP Code: 1192401010

Offered at USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Environmental Health Engineering

Admission Program Objective Code: ENVR
State CIP Code: 1192401010

Offered at FIU, FGCU, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Environmental Science

Admission Program Objective Code: ENVS
State CIP Code: 1192401010

Offered at FSU (BA only), UF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030104, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required.

The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Environmental Science - Geography/Environmental Management

Admission Program Objective Code: ENVG
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130104, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FAU, UNF)

Admission Program Objective Code: EXFA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FGCU only)

Admission Program Objective Code: EXFG
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (USF only)

Admission Program Objective Code: EXUS
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear,

quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Finance, General (BS) or Banking (BAS)

Admission Program Objective Code: FINB
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU*, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF, SPC (BAS)

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520801
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Financial Services

Admission Program Objective Code: FINS
State CIP Code: 1192401010

Offered at UNF, FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Fire and Emergency Services

Admission Program Objective Code: FRES
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430203
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Fire Science Management (BAS)

Admission Program Objective Code: FIR1
State CIP Code: 1192401010

Offered at FSCJ
Transfer Program CIP code: 430202

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Dietetics

Admission Program Objective Code: FSTD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Food Science

Admission Program Objective Code: FOOD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 1/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Foreign Language, Multiple

Admission Program Objective Code: FORG
State CIP Code: 1192401010

Offered at UCF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.*

*See Notes on Common Course Prerequisite Manual

AA Transfer Major: Forensic Science

Admission Program Objective Code: FORE
State CIP Code: 1192401010

Offered at FGCU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Forest Resources & Conservation - Wildlife Ecology & Conservation

Admission Program Objective Code: FORW
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: General Studies

Admission Program Objective Code: GENS
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology

Admission Program Objective Code: GEOT
State CIP Code: 1192401010

Offered at FAU, FIU, FSU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400601, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth’s interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology - Earth Science Teacher Education

Admission Program Objective Code: GEEA
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400601
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth’s interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geomatics Engineering

Admission Program Objective Code: GEOE
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current

circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Geoscience - FSU Teach

Admission Program Objective Code: GEOS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric

substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Gerontology

Admission Program Objective Code: GERO
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 301101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Graphic Design

Admission Program Objective Code: GRPH
State CIP Code: 1192401010

Offered at FAMU, FSU*, UF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500409
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix

AA Transfer Major: Health and Physical Education, General - Exercise Science

Admission Program Objective Code: HPEE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health and Physical Education, General - Health, Leisure, and Fitness Studies

Admission Program Objective Code: HPEH
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health and Physical Education, General - Physical Education

Admission Program Objective Code: HPEP
State CIP Code: 1192401010

Offered at FAMU, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- 4 Credit hours in Skill Development Courses in Physical Activities
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Information Management

Admission Program Objective Code: HEIM
State CIP Code: 1192401010

Offered at FAMU, UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510706
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- CGSXXXX - Any course with the CGS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science (Track 5/7) (SSCF, FGCU)

Admission Program Objective Code: HESC
State CIP Code: 1192401010

Offered at FGCU, SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Community Health (Track 6/7) (UNF)

Admission Program Objective Code: HUNF
State CIP Code: 1192401010

Offered at UNF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Concentration in Physician Assistant Studies (Track 2/7) (MDC)

Admission Program Objective Code: HMDC
State CIP Code: 1192401010

Offered at MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 510000, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Pre-Clinical/Pre-Physical Therapy (Track 3/7) (FAMU, UCF)

Admission Program Objective Code: HSPC
State CIP Code: 1192401010

Offered at FAMU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory

technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Services Administration

Admission Program Objective Code: HLSR
State CIP Code: 1192401010

Offered at SFC, FAMU, FAU, FGCU, FIU, IRSC, SCFMS, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory

will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Health Services Administration (BAS)

Admission Program Objective Code: HSAD
State CIP Code: 1192401010

Offered at EFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512211
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health Teacher Education (FSU)

Admission Program Objective Code: HTED
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131307
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: History

Admission Program Objective Code: HIST
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 540101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

AA Transfer Major: Honors College (FAU)

Admission Program Objective Code: HONB
State CIP Code: 1192401010

Offered at FAU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 2/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Honors College (NCF)

Admission Program Objective Code: HONA
State CIP Code: 1192401010

Offered at NCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 1/2
*See note in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FAU, FSU, UWF)

Admission Program Objective Code: HAMB
State CIP Code: 1192401010

Offered at FAU, FSU*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours** ♦, equivalent, or higher

or

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the

activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry

terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FIU)

Admission Program Objective Code: HAMD
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (Track 1/4) (FIU, FSU, UCF)

Admission Program Objective Code: HAMA
State CIP Code: 1192401010

Offered at FIU, FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (USFSM)

Admission Program Objective Code: HAMC
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Human Resource Management

Admission Program Objective Code: HRMG
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Human Services

Admission Program Objective Code: HUSR

Offered at FSCJ, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Humanities

Admission Program Objective Code: HUMA
State CIP Code: 1192401010

Offered at FSU, UCF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Industrial & Systems Engineering

Admission Program Objective Code: INSY
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and

planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Industrial/Manufacturing Engineering

Admission Program Objective Code: INDS
State CIP Code: 1192401010

Offered at FAMU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Information Sciences and Studies - Computer Information Systems EN EIF

Admission Program Objective Code: INSC
State CIP Code: 1192401010

Offered at EFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (BC, FAMU, FIU, FSU, USF, UWF)

Admission Program Objective Code: INTB
State CIP Code: 1192401010

Offered at BC, FAMU, FIU, FSU, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 2/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course

and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)*
- COPXXXX - Any computer programming course*
- COPXXXX - COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
- MACXXXX Pre-Calculus course or Discrete Math
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (UCF, USFSM, DSC)

Admission Program Objective Code: INTA
State CIP Code: 1192401010

Offered at UCF, USF, USFSM, DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- PSYXXXX - Any course with the PSY prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics,

mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)
- COP2XXX - Any computer programming course*
- PHYXXXX - Any course with the PHY prefix
- COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Insurance

Admission Program Objective Code: INSU
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be

emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interdisciplinary Studies

Admission Program Objective Code: INTE
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 309999
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum

grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interior Design (BAS)

Admission Program Objective Code: INDE
State CIP Code: 1192401010

Offered at SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500408, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International /Global Studies

Admission Program Objective Code: INTG
State CIP Code: 1192401010

Offered at UCF, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 302001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Business Management

Admission Program Objective Code: INTN
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, SCFMS, SPC, USF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Relations

Admission Program Objective Code: INTR
State CIP Code: 1192401010

Offered at FIU, FSU, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jewish Studies

Admission Program Objective Code: JWST
State CIP Code: 1192401010

Offered at FAU, FU
Transfer Program CIP code: 380206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Journalism

Admission Program Objective Code: JOUR
State CIP Code: 1192401010

Offered at UCF*, FAMU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Social Science Ed

Admission Program Objective Code: MTES
State CIP Code: 1192401010

Offered at UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or

- ENLXXXX - Any course with the ENL prefix
  AND
- AMHXXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Special Ed

Admission Program Objective Code: MTSP
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade English Ed

Admission Program Objective Code: MTEN
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

- AMLXXXX - Any course with the AML prefix
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Science Ed

Admission Program Objective Code: MTMS
State CIP Code: 1192401010

Offered at NWFSC, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab
  or
- METXXXXC - Any course with the MET prefix that includes a lab
  or
- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Social Science Ed

Admission Program Objective Code: MTSS
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 4/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this

course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements

for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade English Ed

Admission Program Objective Code: MTSE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab

or

- METXXXXC - Any course with the MET prefix that includes a lab

or

- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade Social Science Ed

Admission Program Objective Code: MTSC
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix and a lab

or

- METXXXXC - Any course with the MET prefix and a lab

or

- OCEXXXXC - Any course with the OCE prefix and a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (FSU)

Admission Program Objective Code: LATA
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050134
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (UCF)

Admission Program Objective Code: LAAS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Assisting

Admission Program Objective Code: LEGA
State CIP Code: 1192401010

Offered at UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Studies, General (UCF)

Admission Program Objective Code: LEGL
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- No specific courses are required

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Liberal Arts & Sciences

Admission Program Objective Code: LIAS
State CIP Code: 1192401010

Offered at FAU, FIU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Linguistics

Admission Program Objective Code: LING
State CIP Code: 1192401010

Offered at FAU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- XXXXXXX - Demonstrated competency by testing or completion of a foriegn language through the intermediate level (SPN 2220 - Spanish III or ASL 2160 - American Sign Language III at NWFSC)*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management and Supervision (BAS - NWF)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(Also see Supervision and Management)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Info Systems - Business/Data Processing/Business Information Mgt

Admission Program Objective Code: MGIN
State CIP Code: 1192401010

Offered at FAU, FGCU, FSU*, SSCF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Science

Admission Program Objective Code: MGNT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Marine/Aquatic Biology

Admission Program Objective Code: MARI
State CIP Code: 1192401010

Offered at FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Marketing, Other - Advertising

Admission Program Objective Code: MARO
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521499
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Materials Engineering

Admission Program Objective Code: MATE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Mathematics General - Mathematics General

Admission Program Objective Code: MATH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (Please check with your transfer institution for the appropriate course)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Jr. High/Middle School Mathematics Ed (NWF)

Admission Program Objective Code: MATN
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of

differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- MACXXXX - Any course with the MAC prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Secondary Mathematics Education

Admission Program Objective Code: MATR
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FSWSC, IRSC, UNF, USF, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

- MACXXXX - Any course with the MAC prefix
  or
- MTGXXXX - Any course with the MTG prefix
  or
- MASXXXX - Any course with the MAS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - FSU - Teach

Admission Program Objective Code: MFSU
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - Mathematics Teacher Education

Admission Program Objective Code: MFIU
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus,

area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mechanical Engineering

Admission Program Objective Code: MECH
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FPU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Medical Technology/Clinical Laboratory Sciences

Admission Program Objective Code: MEDC
State CIP Code: 1192401010

Offered at USF, SFC, FGCU, UCF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511005
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Meteorology - Meteorology

Admission Program Objective Code: METE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400401, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Microbiology/Bacteriology

Admission Program Objective Code: MCBA
State CIP Code: 1192401010

Offered at UCF, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Middle Eastern Studies

Admission Program Objective Code: MIDE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050108
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Motion Picture & Television Technology

Admission Program Objective Code: MOTP
State CIP Code: 1192401010

Offered at FSU*, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500602, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Multi-/Interdisciplinary Studies

Admission Program Objective Code: MULT
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300000
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Music Composition (FSU)

Admission Program Objective Code: MUCO
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500904
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic

dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix **4 Credit Hours**
- MV(K/S/V) XX1X (Applied Music course) **2-4 Credit Hours**
- MV(K/S/V) XX2X (Applied Music course) **2-4 Credit Hours**
- XXXXXXX

- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Performance (FGCU, FSU, UCF, UNF, USF, UWF)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500903
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Studies (USF)

Admission Program Objective Code: MSTU
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 509999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7^{th} chords, augmented 6^{th} chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General (FAMU, FAU, FSU*, UF*, FIU*) (Track 1/2)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU*, UF*, FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of

analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nonprofit Management (UCF)

Admission Program Objective Code: NPRO
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nuclear Engineering

Admission Program Objective Code: NUCL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of

differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Nursing (Track 1/2)

Admission Program Objective Code: NRSN
State CIP Code: 1192401010

Offered at FAMU*, FAU*, FGCU*, FIU*, FSU*, UCF*, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, Track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nursing - AS to BS (NWF)

Admission Program Objective Code: NUR1
State CIP Code: 1192401010

Offered at BC, CC, CCF, DSC*, FAMU*, FAU*, FSCJ, FSWSC, GCSC, NWFSC, PBSC, PESC, PHSC, PSC, SCFMS, SFC, SFSC, IRSC, SPC, SJRSC, TCC, FGCU*, FIU*, FSU*, FGC, MDC, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Paralegal Studies (BAS)

Admission Program Objective Code: PLAA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302, 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Parks & Recreation Management

Admission Program Objective Code: PRKF
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

AA Transfer Major: Parks & Recreation Management - Hospitality, Recreation & Resort Management

Admission Program Objective Code: PRKH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Parks & Recreation Management - Instruction

Admission Program Objective Code: PKRE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Parks & Recreation Management - Recreation and Tourism

Admission Program Objective Code: PRKT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Parks & Recreation Management - Recreation, Tourism & Events

Admission Program Objective Code: PRKR
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

AA Transfer Major: Pharmaceutical Science

Admission Program Objective Code: PHAR
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Pharmacy (Pharm D)

Admission Program Objective Code: PHAD
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512001
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory

technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and

determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy

Admission Program Objective Code: PHIL
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy and Religion

Admission Program Objective Code: PHRL
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 389999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Photonics Science and Engineering

Admission Program Objective Code: PHEN
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141003
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus,

area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Education Teacher Education

Admission Program Objective Code: PHED
State CIP Code: 1192401010

Offered at FIU, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

or

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

- PELXXXX - 4-5 credit hours of courses with the PEL prefix
- PEMXXXX - 3 hours of courses with the PEM prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Science

Admission Program Objective Code: PHSC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physical Science - FSU Teach

Admission Program Objective Code: PHYT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physics

Admission Program Objective Code: PHYS
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physics Teacher Education

Admission Program Objective Code: PHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Political Science & Government

Admission Program Objective Code: POTL
State CIP Code: 1192401010

Offered at FAU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Pre-Elementary/Early Childhood Teacher Ed - Age 3 through Grade 3

Admission Program Objective Code: ECHA
State CIP Code: 1192401010

Offered at CCF, FGC, FGCU, FSCJ, FSU*, MDC, NWFSC, PSC, SCFMS, SFC, SJRSC, UCF, UNF, UWF, SPC, USF, USFSM, FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131210
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this

course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Professional Communication

Admission Program Objective Code: PRCO
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090900
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Project Management (BAS - NWF)

Admission Program Objective Code: PROJ
State CIP Code: 1192401010

Offered at NWFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Psychobiology

Admission Program Objective Code: PSYB
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422706
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the

individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Psychology, General

Admission Program Objective Code: PSCH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 420101
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- One of the following Biology courses: BSC 1005, BSC 1010C, BSC 1011C, BSC 1080, BSC 1085C, BSC 1086C, BSC 2020C
  or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- One of the following Psychology courses: CLP 1001, CLP 2140, DEP 2004, DEP 2100

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Health (FGCU, USF)

Admission Program Objective Code: PUBH
State CIP Code: 1192401010

Offered at FGCU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability

distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Policy and Administration

Admission Program Objective Code: PUBP
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, IRSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Relations & Organizational Communication

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090902
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety and Security

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety Mgt (BAS) or Public Admin (BAS) or Public Safety/Homeland Security

Admission Program Objective Code: PBHL
State CIP Code: 1192401010

Offered at FAU, FSCJ, FSWSC, MDC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 439999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radio & TV Broadcasting

Admission Program Objective Code: RADO
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radiologic and Imaging Science

Admission Program Objective Code: RDTC
State CIP Code: 1192401010

Offered at VC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

> *To be admitted, a student must have current American Registry of Radiologic Technologists (ARRT) certification.**
>
> * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Real Estate

Admission Program Objective Code: REAL
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521501
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability

distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Religious Studies

Admission Program Objective Code: RELG
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Resort & Hospitality Management

Admission Program Objective Code: RSHO
State CIP Code: 1192401010

Offered at FGCU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520906
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Restaurant and Food Service Management

Admission Program Objective Code: REST
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Rhetorical Speech & Communication

Admission Program Objective Code: RHET
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 231304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Russian & East European Studies

Admission Program Objective Code: RUSS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050105
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Ed (BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC)

Admission Program Objective Code: SCIB
State CIP Code: 1192401010

Offered at BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131322
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEB
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 1/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Choose any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (DSC, MDC)

Admission Program Objective Code: SCIC
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131323
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEC
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 2/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered

if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Earth/Space Teacher Education

Admission Program Objective Code: STEE
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 3/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be

associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Middle Grades Science Teacher Education (NWF)

Admission Program Objective Code: MSCI
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 5/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically

about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Physics Teacher Education

Admission Program Objective Code: STEP
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Offered at DSC, MDC - CIP code 131329

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 4/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and

planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - English

Admission Program Objective Code: SETE
State CIP Code: 1192401010

Offered at UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

or

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - Social Science

Admission Program Objective Code: SESS
State CIP Code: 1192401010

Offered at FAMU, UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Biology Teacher Education (Track 4/6) (UCF)

Admission Program Objective Code: BTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Select one course from the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Select one course from the following:

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Chemistry Teacher Education (Track 5/6) (UCF)

Admission Program Objective Code: CTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

Select from the following groups of courses:

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Physics Teacher Education (Track 6/6) (UCF)

Admission Program Objective Code: PHYE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Secondary Mathematics Teacher Education (Track 3/6) (UCF)

Admission Program Objective Code: SMTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Select one course from the following:
MAC XXXX
or MTG XXXX
or MAS XXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Psychology

Admission Program Objective Code: SOPS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422707
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences Teacher Ed (History, Social Science, Economics, and Political Science)

Admission Program Objective Code: SSTE
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131317
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences, General

Admission Program Objective Code: SOSI
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, USF, USFSM, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- Choose any two AA General Education Social Science courses

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Work, General

Admission Program Objective Code: SOWR
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF*, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Sociology

Admission Program Objective Code: SOCI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- Two Sociology courses - Choose from: SYG 2000, SYG 2010, SYG 2430

AA Transfer Major: Sociology - Anthropology

Admission Program Objective Code: SOAN
State CIP Code: 1192401010

Offered at FUI

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Spanish

Admission Program Objective Code: SPAN
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Special Education, General

Admission Program Objective Code: SPED
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF, SPC, IRSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Speech Communication and Rhetoric

Admission Program Objective Code: SPCO
State CIP Code: 1192401010

Offered at FAU, FIU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Speech Pathology & Audiology (FSU, UCF, UF, USF)

Admission Program Objective Code: SPCP
State CIP Code: 1192401010

Offered at FSU*, UCF, UF*, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course with the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology (USFSM)

Admission Program Objective Code: SPCU
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course the the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology - Deaf Studies Concentration

Admission Program Objective Code: SPCH
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Sport Management

Admission Program Objective Code: SPME
State CIP Code: 1192401010

Offered at FSU, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- MARXXXX - Any course with the MAR prefix
  or
- GEBXXXX - Any course with the GEB prefix

- MANXXXX - Any course with the MAN prefix
  or
- BULXXXX - Any course with the BUL prefix
  or
- CGSXXXX - Any course with the CGS prefix
  or
- STA 2023 - Statistics **4 Credit Hours**
  or
- ACGXXXX - Any course with the ACG prefix

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.
or

- ECOXXXX - Any course with the ECO prefix (ECO 2013 or ECO 2023)

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Statistics

Admission Program Objective Code: STAT
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- Two laboratory based science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art

Admission Program Objective Code: SDAR
State CIP Code: 1192401010

Offered at FAMU, FGCU,, FIU, FSU*, UCF, UF*, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARTXXXX - Two courses with the ART prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art - Graphic Design

Admission Program Objective Code: SDGD
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- ARHXXXX - Any course with the ARH prefix

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Supervision & Management (BAS), Organizational Mgt (BAS), Business & Org Mgt (BAS), Administration & Supervision (BAS), Spvr & Org Mgt (BAS) Mgt & Org Leadership (BAS)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(CIP 520299 is Management and Supervision at NWFSC)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Supply Chain Management (BAS)

Admission Program Objective Code: SUPP
State CIP Code: 1192401010

Offered at BC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520203, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Surveying

Admission Program Objective Code: SURV
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 151102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Sustainability and Built Environment

Admission Program Objective Code: SSBL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Sustainability Management - BAS

Admission Program Objective Code: SUST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Students with the following Associate in Science (AS) degrees will be admitted: Environmental Science Technology, Architectural Design & Construction Technology, Drafting and Design Technology or Engineering Technology.

Students who do not have one of the AS degrees listed will be required to take 15 credits in related coursework which mirrors coursework for SPC's AS in Environmental Science Technology degree requirements.

- The courses include: ARCXXXX, CHMXXXX, ECO 2013, ECO 2023, EETXXXX, ETM 1010C, ESCXXXX, EVRXXXX, GLYXXXX, GIS 1040C, OCEXXXX, PHYXXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Teacher Education, Multiple Levels (Track 1/3) (USFSP)

Admission Program Objective Code: TCHE
State CIP Code: 1192401010

Offered at USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Teacher Education, Multiple Levels - Art Education (Track 2/3) (UCF)

Admission Program Objective Code: ARTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

Select one course from the following:

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Technology Management (BAS)

Admission Program Objective Code: TCMG
State CIP Code: 1192401010

Offered at BC, FSCJ, GCSC, PBSC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 111099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

Admission into this BAS program requires an AS degree from a regionally-accredited institution in Computer Engineering Technology, Computer Information Technology, Computer Programming or Database Technology. Students with an AA degree, 60 credit hours but no degree, or an AS degree in another area may be admitted by the Dean on a case-by-case basis.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Tourism and Travel Services Management

Admission Program Objective Code: TOUR
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Trade & Industrial Teacher Ed (Vocational)

Admission Program Objective Code: TRAD
State CIP Code: 1192401010

Offered at FIU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131320
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- 15 hours in courses from the area of specialization*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Transportation Management

Admission Program Objective Code: TRAN
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520209
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Urban & Regional Planning

Admission Program Objective Code: URBA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Urban Design

Admission Program Objective Code: URDS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Veterinary Technology (BAS)

Admission Program Objective Code: VET
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510808
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Vocational Rehabilitation Counseling

Admission Program Objective Code: VOCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512310
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SYGXXXX - Any course with the SYG prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Women's Studies

Admission Program Objective Code: WOMN
State CIP Code: 1192401010

Offered at FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050207
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Zoology

Admission Program Objective Code: ZOO
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Health Science (Track 1/7) (FAU, UF*, USF, USFSP, UWF)

Admission Program Objective Code: HSCI
State CIP Code: 1192401010

Offered at FAU, UF*, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select one course from the following:

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is

an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

or

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Interdisciplinary Medical Science (Track 7/7) (FSU)

Admission Program Objective Code: MESI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select from the following:

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General - Music Teacher Education (FIU*) (Track 2/2)

Admission Program Objective Code: MTEA
State CIP Code: 1192401010

Offered at FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory

Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)

* See Notes on Common Course Prerequisite Manual

AAS Degree General Education Requirements

All A.A.S. degree programs at NWF State College require a minimum of 18 college credits in general education. Unless otherwise specified in the program requirements, students must complete one course from each of the following categories to meet general education requirements.

To assure that graduates of the state university and state college systems share a common base of General Education requirements, the State of Florida has designated general education core course options (designated with ♦) in each of five areas of study—Communication, Humanities, Mathematics, Natural Sciences, and Social Sciences. The A.A.S. degree programs provide flexibility for entering the job market or continuing education. Students who take general education courses are guaranteed transfer of those courses when continuing their education within the Florida College and University System.

NWF State College has embedded the core competencies of speaking, writing, and technology in both the AA, AS, and AAS programs of study; by program design, all AA and AS graduates take courses that allow them to demonstrate their abilities in these important life skills.

Communications: 3

Students will demonstrate the ability to communicate effectively.

Students will demonstrate the ability to analyze communication critically.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

- ___ ____ - Any other AA General Education Communications Course
  ♦ Core General Education
  ▲ Technology-Across-the Curriculum
  ¶ Writing requirements

Humanities: 3

Students will confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.

Students will acquire competence in reflecting critically upon the human condition.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

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- ___ ____ - Any other AA General Education Humanities course with the **†** symbol or any General Education Humanities course AND another course with the **†** symbol.
  ♦ Core General Education
  † Speaking-Across-the Curriculum
  ❖ International and/or diversity focus
  ¶ Writing requirements

Mathematics: 3

Students will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites. Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

___ ____ - Any other AA General Education Mathematics course

♦ **Core General Education**

Natural Sciences: 3

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world.

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for

non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Natural Science course
  - ♦ **Core General Education**

Social Sciences: 3

Students will demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Students will demonstrate an understanding of basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues, past and present, local and global.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Social Science course
  - ♦ **Core General Education**
  - ❖ I**nternational and/or diversity focus**
  - ¶ **Writing requirements**

Additional General Education Credits: 3

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

- ___ ____ - Any other AA General Education course

♦ Core General Education
† Speaking-Across-the Curriculum
▲ Technology-Across-the Curriculum
❖ International and/or diversity focus

Total AAS General Education Credits Required: 18

Footnote Legend

Symbol	Description
♦	Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
▲	Courses listed with this symbol address NWF State College's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.
†	Courses listed with this symbol address NWF State College's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
❖	Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶	Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AAS Degree Checklist:

- Have you completed a minimum of 18 credit hours in the following areas?
    - 3 hours in Communications
    - 3 hours in Humanities
    - 3 hours in Social Sciences
    - 3 hours in Mathematics
    - 3 hours in Natural Sciences
    - 3 Additional hours in General Education Credits
- Have you completed the required Core and Technical Elective course work for your A.A.S. degree?
- Have you completed at least 25% of the total number of credits for your A.A.S. degree at NWF State College?
- Have you met the minimum 2.0 GPA requirements for the A.A.S.?
- Have you applied for Graduation by the advertised deadline?

Accounting Technology (AS)

Admission Program of Study Code ACCT
State CIP Code 1552030201

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Accounting Technology Management (CCC) (State CIP Code 0552030205).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**

- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment.

Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds

and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 36

Technical Elective Courses

Select 6 credits from the following:

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing

skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Accounting Technology (AS) (ACCT)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours** ♦ ▲ ¶ Humanities General Education **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ECO 2013 - Economics I **3 Credit Hours** ♦ ENC 2210 - Technical Report Writing **3 Credit Hours** ACO 1806 - Payroll Accounting **3 Credit Hours** Science General Education Course **3 Credit Hours**

Additional General Education Credits **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** BUL 2241 - Business Law I **3 Credit Hours** Technical Elective **3 Credit Hours** Social Science General Education **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** ACG 2450 - Computer Applications for Accounting **3 Credit Hours** TAX 2000 - Federal Income Tax: Individual **3 Credit Hours** ACG 2071 - Managerial Accounting **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Accounting Technology Management (CCC)

Admission Program of Study Code AASA
State CIP Code 0552030205

Students who successfully complete this certificate may be eligible to receive credits towards the Accounting Technology (AS) degree (State CIP Code 1552030201).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 27

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Accounting Technology Management (CCC) (ACCM)
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** ACG 2450 - Computer Applications for Accounting **3 Credit Hours**

ACG 2071 - Managerial Accounting **3 Credit Hours** ACO 1806 - Payroll Accounting **3 Credit Hours** TAX 2000 - Federal Income Tax: Individual **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 27

Advanced Computer-Aided Technical Design Certificate (CCC)

Admission Program of Study Code ACAT
State CIP Code 0615130101

Students who successfully complete this certificate may be eligible to receive credits towards the Computer-Aided Drafting and Design - Mechanical Design Option (AS) degree (State CIP Code 1615130102).

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

A**dvanced Computer-Aided Technical Design Certificate (CCC) (ACAT)**
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** **Total Semester Hours: 10**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 1112 - Mechanical Drafting I **4 Credit Hours** **Total Semester Hours: 7**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 2731 - Mechanical Drafting II **4 Credit Hours** **Total Semester Hours: 7**
Total Semester Hours: 24

Applied Management (AAS)

Admission Program of Study Code APMG

State CIP Code 0552020107

The A.A.S. degree in Applied Management examines the ways in which management skills are used in a variety of businesses. Students interested in a broad range of technical fields will be able to prepare for leadership roles in the Business Management and Administration professions.

General Education

Select one course from each category; see the AAS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ LIN 1670 - LIN 1670 - Writing and Grammar or higher Communication Course **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ MAT 1033A - MAT 1033A - Intermediate Algebra Mathematics **3 Credit Hours**

- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 30 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course

includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

____ ____ Other Approved College Credits (Requires Dept. Chair Approval)

Total Technical Elective Credits Required: 30

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Applied Management (AAS) - (XXXX)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MNA 1345 - Supervision I **3 Credit Hours** Science General Education Course **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**

Second Year
Fall Semester MAN 2021 - Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Humanitites General Education Course **3 Credit Hours** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAN 2300 - Personnel Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Architectural Design & Construction Technology - Architectural Design Option (AS)

Admission Program Objective Code ARDO
State CIP Code 1604090100

The purpose of this program is to prepare students for employment as architectural drafters in the residential design and light commercial structures field.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**

- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Total Core Credits Required: 30

Technical Elective Courses

Select 18 credits from the following:

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

EGN 1130C - Descriptive Geometry

3 Credit Hours
(Fall, Spring, Summer)

Covers basic principles of orthographic projection, auxiliary views and rotation as they apply to points, lines and planes in space; addition of coplanar and non-coplanar vectors; intersections and developments; and selected abstract, exponometric and oblique projection, and practical problems.

Prerequisite(s): EGN 1111C or equivalent.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

Total Technical Elective Credits Required: 18

Total Program Credits Required: 66

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Architectural Design & Construction Technology - Architectural Design Option (AS) (ARDO)
First Year
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** BCN 1272 - Blueprint Reading for Commercial Construction **3 Credit Hours - Offered at Night Only** BCN 1230 - Building Construction Materials and Processes **3 Credit Hours - Offered at Night Only** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ETD 1320C - AutoCAD I **3 Credit Hours** EGN 1111C - Engineering Graphics **3 Credit Hours**

Technical Elective **3 Credit Hours**

General Education Course - **3 Credit Hours**

Total Semester Hours: 12

Summer Semester

ETD 1340C - AutoCAD II **3 Credit Hours**

ARC 2201 - Theory of Architecture **3 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours**

General Education Course **- 3 Credit Hours**

Total Semester Hours: 12

Second Year

Fall Semester

ARC 2303A - Design 2.1 **6 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

General Education Course **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

TAR 2121C - Architectural Drafting **3 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

General Education Course **- 4 Credit Hours**

Additional General Education Hours **- 2 Credit Hours**

Total Semester Hours: 15

Total Program Hours: 66

Architectural Design & Construction Technology - Construction Technology Option (AS)

Admission Program Objective Code ARCO
State CIP Code 1604090100

The purpose of this program is to prepare students for employment in the building construction field in the residential design and light commercial structures.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Total Core Credits Required: 30

Technical Elective Courses

Select 18 credits from the following:

BCN 1520 - Electrical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with electrical terminology, practices, methods, code requirements and safety and health in construction.

BCN 1567 - Plumbing and Gas Construction Practices

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with Plumbing and Gas code requirements, terminology, methods, practices, processes and safety and health used in building construction.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

BCN 2560 - Mechanical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with mechanical trades terminology, methods, practices, code requirements processes, and safety and health criteria in mechanical construction.

BCN 2721 - Construction Management/Planning

3 Credit Hours
(Fall, Spring, Summer)

The course covers project development and organization from pre-construction site investigation to final completion. The course will include the management of project estimates, plans, schedules, operations and safety. The student will become knowledgeable about documents used in the construction industry for bid, contracts, zoning, permits, bonds, loans specifications and drawings. Cost engineering, procurement, value engineering and quality assurance will be covered. Cost management through job cost analysis and purchase order systems will also be covered.

BCT 1763 - Construction Safety and Health

3 Credit Hours
(Fall, Spring, Summer)

A basic course in construction safety and health, covering such topics as: theories of accident causation; workplace hazards; hazard analysis and prevention; accident reporting; OSHA construction standard and safety practices; environmental safety; violence in the workplace; ergonomics; ethics and safety; workers' compensation; and stress on the job.

BCT 2761 - Structural Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with structural terminology, practices, methods, code requirements and safety, and health criteria in construction.

BCT 2770 - Construction Estimating

3 Credit Hours
(Fall, Spring)

A course in estimating as it relates to the construction industry covering references, estimating methods, take-off organization and presentation; material take-off, cost estimating in heavy construction, mathematical formulas for estimating, quantity take-off from plan review, and computer estimating overview.

Prerequisite(s): BCN 1230, BCN 1272.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 18

Total Program Credits Required: 66

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Architectural Design & Construction Technology - Construction Technology Option (AS) (ARCO)
First Year
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** BCN 1230 - Building Construction Materials and Processes **3 Credit Hours** - **Offered at Night Only** BCN 1272 - Blueprint Reading for Commercial Construction **3 Credit Hours - Offered at Night Only** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ETD 1320C - AutoCAD I **3 Credit Hours** Technical Elective **3 Credit Hours** EGN 1111C - Engineering Graphics **3 Credit Hours** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester ETD 1340C - AutoCAD II **3 Credit Hours** ARC 2201 - Theory of Architecture **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** General Education Course **- 3 Credit Hours** **Total Semester Hours: 12**
Second Year
Fall Semester

ARC 2303A - Design 2.1 **6 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester TAR 2121C - Architectural Drafting **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **4 Credit Hours** Additional General Education Hours **- 2 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 66

AS Degree General Education Requirements

All A.S. degree programs at NWF State College require a minimum of 18 college credits in general education. **Unless otherwise specified in the program requirements**, students must complete one course from each of the following categories to meet general education requirements.

To assure that graduates of the state university and state college systems share a common base of General Education requirements, the State of Florida has designated general education core course options (designated with ♦) in each of five areas of study—Communication, Humanities, Mathematics, Natural Sciences, and Social Sciences. The A.S. degree programs provide flexibility for entering the job market or continuing education. Students who take general education courses are guaranteed transfer of those courses when continuing their education within the Florida College and University System.

NWF State College has embedded the core competencies of speaking, writing, and technology in both the AA and AS programs of study; by program design, all AA and AS graduates take courses that allow them to demonstrate their abilities in these important life skills.

Communications: 3

Students will demonstrate the ability to communicate effectively.

Students will demonstrate the ability to analyze communication critically.

A minimum grade of "C" in each Communications course is required for general education credit.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ___ ____ - Any other AA General Education Communications Course
  ♦ Core General Education
  ▲ Technology-Across-the Curriculum
  ¶ Writing requirements

Humanities: 3

Students will confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.

Students will acquire competence in reflecting critically upon the human condition.

A minimum grade of "C" in Humanities courses is required for general education credit.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ___ ____ - Any other AA General Education Humanities course with the **†** symbol or any General Education Humanities course AND another course with the **†** symbol.
  ♦ Core General Education
  † Speaking-Across-the Curriculum
  ❖ International and/or diversity focus
  ¶ Writing requirements

Mathematics: 3

Students will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

All Mathematics courses listed below meet Mathematics requirements outlined in FAC Rule 6A-10.030.

A minimum grade of "C" in Mathematics courses is required for general education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites.
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Mathematics course
  - ♦ **Core General Education**

Natural Sciences: 3

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world.

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Natural Science course
  - ♦ **Core General Education**

Social Sciences: 3

Students will demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Students will demonstrate an understanding of basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues, past and present, local and global.

A minimum grade of "C" in courses with the ¶ symbol is required for general education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the

dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Social Science course
  - ♦ **Core General Education**
  - ❖ I**nternational and/or diversity focus**
  - ¶ **Writing requirements**

Additional General Education Credits: 3

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will

enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in

preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

- ___ ____ - Any other AA General Education course

♦ Core General Education
† Speaking-Across-the Curriculum
▲ Technology-Across-the Curriculum
❖ International and/or diversity focus

Total AS General Education Credits Required: 18

Footnote Legend

Symbol	Description
♦	Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
▲	Courses listed with this symbol address NWF State College's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.
†	Courses listed with this symbol address NWF State College's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

❖	Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶	Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AS Degree Checklist:

- Have you completed a minimum of 18 credit hours in the following areas?
  - 3 hours in Communications – ("C" or better)
  - 3 hours in Humanities – ("C" or better)
  - 3 hours in Social Sciences
  - 3 hours in Mathematics ("C" or better)
  - 3 hours in Natural Sciences
  - 3 Additional hours in General Education Credits
- Have you completed the required Core and Technical Elective course work for your A.S. degree?
- Have you completed at least 25% of the total number of credits for your A.S. degree at NWF State College?
- Have you met the minimum 2.0 GPA requirements for the A.S.?
- Have you applied for Graduation by the advertised deadline?
- Check to see if you qualify for any of the companion Certificates listed for your A.S. degree and complete a separate graduation application for each one.

Audio Technology (Recording Arts) (CCC)

Admission Program of Study Code ATRA
State CIP Code 0650060209

Students who successfully complete this program may apply these credits to the Music Production Technology (AS) degree (State CIP Code 1650091300).

Core Courses

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

- ____ ____ Other Approved College Credits (MUL, MUM, MUN, MUS, MUT, MVB, MVK, MVP, MVS, MVV, MVW) **3 Credit Hours**

Total Program Credits Required: 15

Auxiliary Law Enforcement Officer Basic (PSAV)

Admission Program of Study Code LEAY
State CIP Code 0743010701

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the

awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 333

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Auxiliary Law Enforcement Officer Basic (PSAV) (LEAY)
Fall Semester CJK 0240 - Law Enforcement Auxiliary Introduction **27 Clock Hours** CJK 0241 - Law Enforcement Auxiliary Patrol and Traffic **21 Clock Hours** CJK 0242 - Law Enforcement Auxiliary Investigations **18 Clock Hours** CJK 0422 - Dart-Firing Stun Gun **9 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0020 - Law Enforcement CMS Vehicle Operations **48 Clock Hours** **Total Semester Clock Hours: 333**
Total Program Clock Hours: 333

Business Administration (AS)

Admission Program of Study Code BADM
State CIP Code 1552020102

Students who successfully complete selected courses from this program of study may be eligible to receive the Business Management (CCC) (State CIP Code 0552070101), Business Development and Entrepreneurship (CCC) (State CIP Code 0552070306), and/or Business Specialist (Marketing) (CCC) (State CIP Code 0552020103) college credit certificates.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash

discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Administration (AS) (BADM)
First Year
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** BUL 2241 - Business Law I **3 Credit Hours**

ECO 2013 - Economics I **3 Credit Hours ♦** Science General Education Course **3 Credit Hours** Additional General Education Hours **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester MAN 2021 - Management **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ENC 2210 - Technical Report Writing **3 Credit Hours** ACG 2071 - Managerial Accounting **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Business Development and Entrepreneurship (CCC)

Admission Program of Study Code BMDE
State CIP Code 0552070306

Students who successfully complete this certificate may be eligible to receive credits towards the Business Administration (AS) degree (State CIP Code 1552020102).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ENT 2931 - Selected Studies in Entrepreneurship

1 Credit Hour
(Spring)

In this course, topics of current interest are presented in group instruction.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 25

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Development and Entrepreneurship (CCC) (Program Code Needed
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** GEB 2430 - Business Ethics **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester BUL 2241 - Business Law I **3 Credit Hours** MAN 2300 - Personnel Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** SBM 2000 - Small Business Management **3 Credit Hours** ENT 2931 - Selected Studies in Entrepreneurship **1 Credit Hour** **Total Semester Hours: 13**
Total Program Hours: 25

Business Management (CCC)

Admission Program of Study Code BMGC
State CIP Code 0552070101

Students who successfully complete this certificate may be eligible to receive credits toward the Business Administration (AS) degree (CIP Code 1552020102).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 12 credits from the following:

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments

as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Management (CCC) (BMGC)
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 24

Business Specialist (Marketing) (CCC)

Admission Program of Study Code BUSS
State CIP Code 0552020103

Students who successfully complete this certificate may be eligible to receive credits toward the Business Administration (AS) degree (CIP Code 1552020102).

Core Courses

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Specialist (Marketing) (CCC) (BUSS)
Fall Semester MAR 2011 - Introduction to Marketing **3 Credit Hours** MKA 2021 - Professional Selling **3 Credit Hours** **Total Semester Hours: 6** **Spring Semester** MKA 2041 - Retail Management **3 Credit Hours**

MKA 2511 - Introduction to Advertising **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 12

Chef's Apprentice (CCC)

Admission Program of Study Code: CHEF

State CIP Code 0612050302

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Child Care Center Management Specialization (CCC)

Admission Program of Study Code CCCM
State CIP Code 0419070906

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

Total Program Credits Required: 12

Child Development Early Intervention (CCC)

Admission Program of Study Code CDEI
State CIP Code 0419070904

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Total Core Credits Required: 36

Total Program Credits Required: 36

CNC Machinist/Fabricator (CCC)

Admission Program of Study Code CNMM
State CIP Code 0648051002

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric

part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

CNC Machinist/Fabricator (CCC) (CNMM)
First Year **Fall Semester** ETD 2364C - SolidWorks I **3 Credit Hours** PMT 1250C - Introduction to CNC Machining **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 6**
Spring Semester PMT 2261C - CNC Machining I **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 3**
Second Year **Fall Semester** PMT 2262C - CNC Machining II **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 3**
Total Program Hours: 12

Computer Engineering Technology (AS)

Admission Program of Study Code CENG
State CIP Code 1615120100

Students who successfully complete selected courses from this program of study may be eligible to receive the Microcomputer Repairer/Installer (CCC) (State CIP Code 0647010406) college credit certificate.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2143C - CompTIA Server+

3 Credit Hours
(Spring)

This course provides advanced concepts in server hardware components and troubleshooting in a non-vendor-specific environment. Introduction to server installation, server storage concepts, administering services, server roles, virtualization, performance monitoring, security, data protection, and maintenance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2941 - Computer Engineering Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2942 - Computer Engineering Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

- COP 2XXX- Any Computer Programming Course **3 Credit Hours**

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Engineering Technology (AS) (CENG)

First Year

Fall Semester

CIS 1000 - Introduction to Computer Science **3 Credit Hours**

CTS 1134 - Network Foundations **3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Humanities General Education **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

CET 2182C - PC Hardware A+ **3 Credit Hours**

CTS 2143C - CompTIA Server+ **3 Credit Hours**

Science General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

CTS 1156C - Desktop Support **3 Credit Hours**

COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours**

CET 2660 - Network Security **3 Credit Hours**

Social Science General Education **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Technical Elective **2 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Computer Programmer (CCC)

Admission Program of Study Code CMPG
State CIP Code 0511020200

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Programming and Analysis (AS) degree (State CIP Code 1511020101).

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 12 credits from the following:

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 33

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programmer (CCC) (CMPG)
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester COP 2220 - Programming in C **3 Credit Hours** COP 2010 - Visual Basic Programming **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** COP 2700 - Introduction to SQL **3 Credit Hours** COP 2224 - Programming in C++ **3 Credit Hours** **Total Semester Hours: 15**
Summer Semester COP 2805 - Advanced Java Programming **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 33

Computer Programming and Analysis (AS)

Admission Program Objective Code CPRO
State CIP Code 1511020101

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Computer Programmer (CCC) (State CIP Code 0511020200) and/or Computer Programming Specialist (CCC) (State CIP Code 0511020103).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Science **3 Credit Hours**
- ____ ____ Social Science **3 Credit Hours**
- ____ ____ General Education Electives **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programming and Analysis (AS) (CPRO)	Companion Certificates*	
First Year	CMPG	CMPS
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√
Spring Semester COP 2220 - Programming in C **3 Credit Hours** COP 2224 - Programming in C++ **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** MAD 2104 - Introduction to Discrete Mathematics **3 Credit Hours** Science General Education Course **3 Credit Hours** **Total Semester Hours: 15**	√ √ √	 √ √
Second Year		
Fall Semester CGS 2820 - Web Design **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**	√	√
Spring Semester		

COP 2010 - Visual Basic Programming **3 Credit Hours** COP 2228 - Advanced Programming in C++ **3 Credit Hours** COP 2700 - Introduction to SQL **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	 √
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: CMPG - Computer Programmer (CCC) CMPS - Computer Programming Specialist (CCC)		

Computer Programming Specialist (CCC)

Admission Program of Study Code CMPS
State CIP Code 0511020103

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Programming and Analysis (AS) degree (State CIP Code 1511020101).

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 12

Technical Elective Courses

Select 6 credits from the following:

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved

projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programming Specialist (CCC) (CMPS)
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester COP 2224 - Programming in C++ **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 18

Computer-Aided Design and Drafting (CCC)

Admission Program of Study Code CADD
State CIP Code 0615130304

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Design & Modeling Specialization Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands,

advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools,

advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Computer-Aided Design and Drafting (CCC) (CADD)
Fall Semester ETD 1320C - AutoCAD I **3 Credit Hours** ETD 2357C - Inventor I **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester

ETD 1340C - AutoCAD II **3 Credit Hours** ETD 2358C - Inventor II **3 Credit Hours** ETD 2368C - SolidWorks II **3 Credit Hours** **Total Semester Hours: 9**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 24

Computer-Aided Drafting and Design - Mechanical Design Option (AS)

Admission Program Objective Code CAD
State CIP Code 1615130102

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Computer-Aided Technical Design Certificate (CCC) (State CIP Code 0615130204) and/or Advanced Computer-Aided Technical Design Certificate (CCC) (State CIP 0615130101).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for

students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 19

Technical Elective Courses

Select 25 credits from the following:

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETD 2218 - Geometric Dimensioning and Tolerancing

4 Credit Hours
(Fall, Summer)

An introductory course in geometric dimensioning and tolerancing using the geometric method nationally accepted according to ASMEY 14.5M. Topics covered include: definition and terms, symbols, datum referencing, locational tolerancing, form tolerancing, profile tolerancing, orientation and runout tolerancing, and math for positional tolerancing.

Prerequisite(s): ETD 1217 or equivalent.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary

views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

ETD 2735 - Mechanical Drafting III

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include: isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, and precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 2218 and ETD 2731 or equivalent.

Total Technical Elective Credits Required: 25

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer-Aided Drafting and Design - Mechanical Design Option (AS) (CAD)	Companion Certificate*	
First Year	CATD	ACAT
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 13**	√ √	√ √ √
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 1112 - Mechanical Drafting I **4 Credit Hours** ETD 2218 - Geometric Dimensioning and Tolerancing **4 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**	√	√ √

Total Semester Hours: 14		
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 2731 - Mechanical Drafting II **4 Credit Hours** Social Science General Education **3 Credit Hours** **Total Semester Hours: 10**	√	√ √
Second Year		
Fall Semester ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** ETD 2735 - Mechanical Drafting III **4 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** Mathematics General Education **3 Credit Hours** **Total Semester Hours: 13**	√	
Spring Semester ETD 2357C - Inventor I **3 Credit Hours** ETD 2368C - SolidWorks II **3 Credit Hours** Science General Education **4 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 13**		
Total Program Hours: 62		
* Courses with √ can also be used in the Companion Certificate indicated: CATD-Computer-Aided Technical Design Certificate (CCC) ACAT-Advanced Computer-Aided Technical Design Certificate (CCC)		

Computer-Aided Drafting and Design - Technical Illustration Option (AS)

Admission Program Objective Code CADI
State CIP Code 1615130102

The purpose of this program is to prepare students for employment as technical illustrators. Technical illustrators are typically responsible for 2D and 3D illustrations for use in technical documents and service manuals. Technical

illustrators work in conjunction with engineers and technical writers to gather information that would be conveyed into technical drawings. Drawing software can include AutoCAD, Inventor, Solidworks, Isodrraw, PhotoShop, Illustrator or other software.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Computer-Aided Technical Design Certificate (CCC) (State CIP Code 0615130204).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 19

Technical Elective Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings

with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

ETD 1801C - Technical Illustration

3 Credit Hours
(Fall)

The purpose of this course is to help students develop the skills, knowledge, and attitudes necessary to be job entry-level qualified as technical illustrators.

Prerequisite(s): ETD 1112 or EGN 1130C, and ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

ETD 2802C - Technical Illustration II

3 Credit Hours
(Spring)

The purpose of this course is to help students develop advanced skills, knowledge, and attitudes necessary as technical illustrators, to include oblique, and axiometric projections, perspective and exploded pictorial drawings, and related techniques.

Prerequisite(s): ETD 1340C or equivalent.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems.

Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 25

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer-Aided Drafting and Design - Technical Illustration Option (AS) **(CADI)**	Companion Certificate*
First Year	CATD
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 13**	 √ √
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 2357C - Inventor I **3 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 12**	 √
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1801C - Technical Illustration **3 Credit Hours**	 √

GRA 1152C - Illustration II **3 Credit Hours** Social Science General Education **3 Credit Hours** **Total Semester Hours: 12**	
Second Year	
Fall Semester ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** ETD 2802C - Technical Illustration II **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** Mathematics General Education **3 Credit Hours** **Total Semester Hours: 12**	√
Spring Semester ETD 2371C - 3D Printing I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** Science General Education **4 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 14**	
Total Program Hours: 62	
* Courses with √ can also be used in the Companion Certificate indicated: CATD-Computer-Aided Technical Design Certificate (CCC)	

Computer-Aided Technical Design Certificate (CCC)

Admission Program of Study Code CATD
State CIP Code 0615130204

Students who successfully complete this certificate may be eligible to receive credits towards the Computer-Aided Drafting and Design - Mechanical Design Option (AS) degree (State CIP Code 1615130102) and the Computer-Aided Drafting and Design - Technical Illustration Option (AS) (State CIP Code 1615130102).

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and

tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Computer-Aided Technical Design Certificate (CCC) (CATD)
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 15

Correctional Officer (Basic) (PSAV)

Admission Program of Study Code CORR
State CIP Code 0743010200

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0300 - Introduction to Corrections

33 Clock Hours
(Offered as needed)

This course introduces students to the legal and ethical responsibilities of a correctional officer. Legal terms and definitions are explained. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0305 - CJSTC Communications

42 Clock Hours
(Offered as needed)

This course covers the entire report writing process. Topics include interview and interrogation, interpersonal communication, and practical exercises. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0310 - Officer Safety

12 Clock Hours
(Offered as needed)

Correctional officer safety procedures are learned. Students will learn to identify potential hazards and learn how to safely respond. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0315 - Facility and Equipment

12 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for inspecting a correctional facility and equipment. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0320 - Intake and Release

18 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for admitting and releasing inmates in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0325 - Supervising in a Correctional Facility

42 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for supervising inmates in a correctional facility. They also learn to detect crimes and rule violations in various correctional facility settings. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0330 - Supervising Special Populations

21 Clock Hours
(Offered as needed)

Students learn how to identify and supervise special population groups, such as threat groups, juveniles, elderly, and mentally ill inmates. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0335 - Responding to Incidents and Emergencies

18 Clock Hours
(Offered as needed)

Students learn how to identify and respond to situations involving escapes, riots, bomb threats, fires, and medical emergencies in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0340 - Corrections PSAV Physical Fitness

30 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 438

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Correctional Officer (Basic) (PSAV) (CORR)
Fall Semester CJK 0300 - Introduction to Corrections **33 Clock Hours** CJK 0305 - CJSTC Communications **42 Clock Hours** CJK 0310 - Officer Safety **12 Clock Hours** CJK 0315 - Facility and Equipment **12 Clock Hours** CJK 0320 - Intake and Release **18 Clock Hours** CJK 0325 - Supervising in a Correctional Facility **42 Clock Hours** CJK 0330 - Supervising Special Populations **21 Clock Hours**

CJK 0335 - Responding to Incidents and Emergencies **18 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0340 - Corrections PSAV Physical Fitness **30 Clock Hours** **Total Semester Clock Hours: 438**
Total Program Clock Hours: 438

Criminal Justice Technology (AS)

Admission Program of Study Code CJTC
State CIP Code 1743010302

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- PSY 2012 Psychology **3 Credit Hours** ♦
- SYG 2000 Sociology **3 Credit Hours** ♦ ❖

Total General Education Credits Required: 18

Core Courses

CCJ 1010 - Introduction to Criminology

3 Credit Hours
(Spring)

A study of the nature and causes of crime and delinquency; the development of delinquent and criminal behavior; theory development in criminology, crime rates and trends, victimology and particular crime pattern areas.

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal

justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CJC 2000 - Introduction to Corrections

3 Credit Hours
(Fall)

Theories of punishment and incarceration; the organization of correction programs and institutions, principles of probation and parole, role of parole and probation officers, legal implications; and problems of rehabilitation are covered. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJE 2300 - Police Administration and Organization

3 Credit Hours
(Fall, Spring, Summer)

This course presents the principles of organization and administration in law enforcement including functions and activities, planning and research, public relations, personnel and training, inspection and control, records and communications and custody.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CCJ 1941 - Internship – Criminal Justice

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Permission of the instructor

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CCJ 2509 - Introduction to Gangs and Crime

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of street gangs, the social factors, and the general classifications necessary for the law enforcement, corrections, and public safety professional. This course explores the history, membership, activity, current trends, and influence of street gangs. Students will be challenged to define community-based solutions and strategies to combat the criminal activity associated with street gangs.

CCJ 2934 - Special Topics in Criminal Justice

2 Credit Hours
(Fall, Spring, Summer)

This course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

*This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CJE 1642C - Introduction to Crime Scene Technology

3 Credit Hours
(Fall, Spring, Summer)

This course explains and discusses the principals and theories in crime scene technology. The course covers specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence, gunshot residue, blood splatter and bodies.

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2330 - Ethics in Criminal Justice

3 Credit Hours
(Fall, Spring, Summer)

This course is a detailed exploration of ethical issues in Criminal justice with special emphasis on morality and the law, human behavior, and ethical decision making in law enforcement, corrections and the courts.

CJE 2400 - Police and Community Relations

3 Credit Hours
(Fall, Spring, Summer)

A study of the relationship of the Justice Administration agencies to the surrounding community. Examines the effect of social change and the consequences that it produces upon law enforcement, corrections, and the courts.

CJE 2600 - Criminal Investigations

3 Credit Hours
(Offered as needed)

Fundamentals of investigation; duties and responsibilities of the detective; interrogation techniques; search and techniques of protecting the crime scene; collection and preservation of evidence; modus operandi systems; scientific aids and other sources of information; court preparation and case follow-up.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

CJJ 1002 - Juvenile Delinquency

3 Credit Hours
(Offered as needed)

A study of the nature and cause of juvenile delinquency, the development of the delinquent and criminal behavior, specific criminal justice subsystem (law enforcement, judicial, corrections) problems dealing with juvenile delinquents from initial contact through final disposition and treatment. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJL 2130 - Criminal Evidence and Procedure

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of criminal procedure particularly applied to search and seizure and evaluation of evidence.

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Criminal Justice Technology (AS) (CJTC)
First Year
Fall Semester CCJ 1020 - Introduction to Criminal Justice **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours** Technical elective **3 Credit Hours** Technical elective **3 Credit Hours** **Semester Total Hours: 15**
Spring Semester CCJ 1010 - Introduction to Criminology **3 Credit Hours** CJC 2000 - Introduction to Corrections **3 Credit Hours** PSY 2012 - Psychology **3 Credit Hours ♦** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Second Year
Fall Semester

CJL 1100 - Criminal Law **3 Credit Hours** CJL 2500 - Courts and the Judicial Process **3 Credit Hours** SYG 2000 - Sociology **3 Credit Hours** ❖ ♦ Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Spring Semester CJE 2300 - Police Administration and Organization **3 Credit Hours** CJJ 1002 - Juvenile Delinquency **3 Credit Hours** CJL 1400 - Criminal Procedure **3 Credit Hours** Natural Sciences **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Total Program Hours: 60

Culinary Arts (CCC)

Admission Program of Study Code: CULA

State CIP Code 0612050301

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career

objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 36

Culinary Arts Management Operations (CCC)

Admission Program of Study Code: CULM

State CIP Code 0612050401

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 2240L - Classical Cuisine

3 Credit Hours
(Fall)

Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 18

Culinary Management (AS)

Culinary Management

Admission Program of Study code: CUL

State CIP Code 1252090101

The Emerald Coast is one of the top tourist beach destinations in the U.S. and tourism is one of the leading industries in Northwest Florida. Northwest Florida State College's Culinary A.S. Degree Program is designed to support the tourism industry by preparing students for employment in the culinary and restaurant industry. Students will gain employability skills and knowledge through classroom instruction and culinary lab experience in the following courses Sanitation and Safety; Maintenance and Operation of Equipment; Methods of Preparation an d Cooking; Perform Different Types of Food Services; Nutrition; Baking; and Dining Room and Beverage Management. Students will also receive training in communications, leadership and human relations skills. This program focuses on broad, transferable skills and stresses understanding and demonstration of elements of the culinary industry. Careers include culinary manager, food and beverage manager, pantry cook, executive chef and many more.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in :

Chef's Apprentice (CCC)
Culinary Arts (CCC)

Culinary Arts Management Operations (CCC)

General Education

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**
- MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**
- BSC 1005 - General Biology **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦** or CHM 1020 - Chemical Science **3 Credit Hours ♦**
- ECO 2013 - Economics I **3 Credit Hours ♦**
- HUN 2201 - Nutrition **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries.

Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Culinary Management (AS)

First Year

Fall Semester

FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

SLS 1101 - College Success **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

FSS 1202L - Food Production I **3 Credit Hours**

FSS 2100 - Food Plans and Menu Preparation **3 Credit Hours**

BSC 1005 - General Biology or PHY 1020 - Physical Science or CHM 1020 - Chemical Science **3 Credit Hours ♦**

MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**

Total Semester Hours: 12

Summer Semester

FSS 2251 - Food and Beverage Management **3 Credit Hours**

FSS 1246L - Baking and Pastries I **3 Credit Hours**

FSS 1120 - Food and Beverage Purchasing **3 Credit Hours**

Total Semester Hours: 9

Second Year

Fall Semester

FSS 1001 - Culinary Techniques **3 Credit Hours**

FSS 1221L - Food Production II **3 Credit Hours**

ECO 2013 - Economics I **3 Credit Hours ♦**

HUN 2201 - Nutrition **3 Credit Hours**

FSS 2240L - Classical Cuisine **3 Credit Hours**

Total Semester Hours: 15
Spring Semester FSS 2942 - Culinary Internship **3 Credit Hours** FSS 2242L - International and Regional Cuisine **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** **Total Semester Hours: 12**
Total Program Hours: 60

Customer Relationship Management (AS)

Admission Program Objective Code CUST
State CIP Code 1252020700

Pending Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) approval, this program will no longer be admitting new students beginning with the Spring 2019 semester.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles.

A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Total Core Credits Required: 30

Technical Elective Courses

Select 12 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing

skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

(can be completed two times for credit)

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Customer Relationship Management (AS) (CUST)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** GEB 1011 - Introduction to Business **3 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester OST 2401 - General Office Management **3 Credit Hours** Mathematics General Education **3 Credit Hours** Natural Science General Education **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours**

Total Semester Hours: 15
Second Year
Fall Semester GEB 2430 - Business Ethics **3 Credit Hours** MAR 2011 - Introduction to Marketing **3 Credit Hours** MNA 1161 - Customer Service **3 Credit Hours** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MNA 2100 - Organizational Behavior **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** ENC 2210 - Technical Report Writing **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Cyber Security (AS)

Admission Program Objective Code CYBE
State CIP Code 1511100307

Students who successfully complete selected courses from this program of study may be eligible to receive the Database and E-Commerce Security (CCC) certificate (State CIP Code 0511100311).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**

- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products,

wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the

student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Cyber Security (AS) (CYBE)
First Year
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CGS 2541 - Introduction to Database Concepts **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 2880C - Digital Forensics Fundamentals **3 Credit Hours** CTS 1106 - Fundamentals of UNIX **3 Credit Hours** Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester CTS 2314C - Network Defense and Countermeasures **3 Credit Hours** CIS 2352C - Ethical Hacking Fundamentals **3 Credit Hours** Social Science General Education **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Database and E-Commerce Security (CCC)

Admission Program Objective Code DECS
State CIP Code 0511100311

Students who successfully complete this certificate may be eligible to receive credits towards the Cyber Security (AS) degree (State CIP Code 1511100307).

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 15

Technical Elective Courses

Select 3 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1843 - Introduction to E-Commerce

3 Credit Hours
(Offered as needed)

This course is designed to provide students with an overview of the dynamics of electronic commerce and how it links information technology to business objectives. Course may not transfer to all State University System institutions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 3

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Database and E-Commerce Security (CCC) (DECS)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CGS 2541 - Introduction to Database Concepts **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Dental Assisting (PSAV)

Admission Program of Study Code DENT
State CIP Code 0351060112

Basic Skills Requirements: The student must be exempt or attain a **10th grade level** on each section of the TABE exam: Math, Language and Reading.

This program is a Limited Admission program subject to additional program policies and requirements stipulated in the "Dental Assisting Student Handbook." The admission criteria and process, as well as some course numbers and credits are subject to change; students should contact the Dental Assisting program office for the most current information.

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted accreditation status of approval without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be

contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: http://www.ada.org/100.aspx.

Students who successfully complete this program and pass the Dental Assisting National Board (DANB) Certificate (CDA) may apply 21 credits towards the Technical Elective requirements for the Health Services Management (AS) degree (State CIP Code 135070100).

Core Courses

DEA 0020 - Pre-Clinical Procedures Theory

60 Clock Hours
(Offered as needed)

This course is designed to provide an introduction to the dental assisting profession to include orientation to four handed dentistry and general dental office procedures including, but not limited to basic principles of disease prevention, patient data collection and assessment, and instrumentation. Emphasis is on adhering to safety guidelines as specified by OSHA.

Corequisite(s): DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DEA 0020L - Pre-Clinical Practice Lab

90 Clock Hours
(Offered as needed)

This is a comprehensive chair side competency based course. The course provides the skills practice necessary for dental assisting students entering four handed dentistry practice including but not limited to infection control, taking and recording vital signs, assisting with operative procedures, principles of preventive dentistry, instrument identification, and use and maintenance of equipment. Emphasis is on aseptic technique and clinical competency with procedures performed in a contemporary dental practice.

Corequisite(s): DEA 0020, DES 0103L.

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DEA 0130 - Oral Pathology

30 Clock Hours
(Offered as needed)

This course is a general study of the scientific and clinical concepts that include additional knowledge base necessary to the practice of dental assisting. Students will study the normal and abnormal conditions of the oral cavity such as

dental caries prevention, the dental caries process and recognition of various common pathological conditions. Oral pathology, histology and embryology are included. Emphasis is on the interrelationship of the information presented with the clinical practice of dental assisting.

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DEA 0803L - Clinical Practice I

150 Clock Hours
(Offered as needed)

This competency based clinical course provides a real world setting in which to integrate the laboratory and clinical skills learned in the classroom. The student receives closely supervised hands on training in chair side dental assisting through rotations at community dental offices. Progress is evaluated using predetermined competency guidelines. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 90 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Corequisite(s): DEA 0020, DEA 0020L.

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DES 0830 - Expanded Function Theory

30 Clock Hours
(Offered as needed)

This course introduces the dental assisting student to the dental specialty practices and more advanced clinical skills. It also provides the theory of dental specialty practice administration as it relates to the role of the dental assistant including ethical and legal ramifications. Lectures relate topics including but not limited to dental specialty procedures, instruments used in the specialty practices and duties delegated to dental assistants according to the rules and regulations of the Florida Dental Practice Act. Role playing and problem solving activities using case studies relate to duties delegated to dental assistants.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830L.

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DES 0830L - Expanded Functions Lab

60 Clock Hours
(Offered as needed)

This laboratory course accompanies the clinical practice lecture course DES 0830 and provides opportunity for students to practice application of the duties delegated to dental assistants according to the Florida Dental Practice Act. Students become more proficient in more advanced skills. Competencies containing information and behavioral objectives allow students to master each skill before advancing to the next.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830.

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DEA 0852L - Clinical Practice II

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice I. It provides a real world setting for students to receive additional training in the clinical skills learned in class. Students are assigned to various offices in the community including but not limited to general dentists, oral surgeons, orthodontists, periodontists, and endodontists. Performance evaluations are utilized to measure competency and provide feedback from the local dental offices to the instructor regarding the students' competency level. Skills are strengthened in Seminar Lab. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 150 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DES 0400

Corequisite(s): DES 0830, DES 0830L.

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DEA 0936 - Dental Assisting Seminar

60 Clock Hours
(Offered as needed)

This course is designed to provide a review of materials commonly covered on the Dental Assisting National Board (DANB) Exam. Topics include but are not limited to infection control, general chair side procedures, and radiographic technique. The seminar will provide a mock board examination, and opportunities for review, problem solving, and strengthening skills. The course also serves as an opportunity for feedback from students' Clinical Practice.

Prerequisite(s): DEA 0852L, DEA 0803L, DES 0205, DES 0205L

Corequisite(s): DEA 0803L, DES 0206L.

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DES 0103 - Dental Materials

60 Clock Hours
(Offered as needed)

This course is a comprehensive study of the theory of manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. The competency based lab that accompanies this course includes exercises to illustrate application and use of selected materials. Students will study various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, as well as acrylic plastics. Students will become familiar with various pieces of dental laboratory equipment and their uses.

Corequisite(s): DES 0103L, DEA 0020L.

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DES 0103L - Dental Materials Lab

90 Clock Hours
(Offered as needed)

This course is a comprehensive study of the manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. Emphasis is on practical application as it relates to the role of the dental assistant in the contemporary dental practice. It is a competency based lab that accompanies the theory course and includes exercises to illustrate application and uses of selected materials. Students practice the use of various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, and acrylic plastics.

Corequisite(s): DES 0103, DEA 0020L.

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DES 0205 - Dental Radiology Lecture

60 Clock Hours
(Offered as needed)

This course is designed to introduce the theory, application and principles of radiographic exposure and processing

techniques used in dentistry. Students will receive instruction including but not limited to historical data, radiation safety, exposure, processing, mounting and error prevention. Image interpretation of radiographic anatomical structures will be included.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205L.

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DES 0205L - Dental Radiology Laboratory I

60 Clock Hours
(Offered as needed)

This laboratory course assists students in radiographic performance techniques using DXTR manikins to achieve competency prior to exposure of various patients with varied dentitions. Students practice exposing, mounting, radiographic interpretation, safe darkroom procedures, identification of landmarks and distinguishing radiographic pathology from normal landmarks. Clinical radiographic skills necessary to produce diagnostic quality radiographs including bitewings, periapical radiographs, and panoramic x-rays will be covered. Emphasis is on patient and operator safety guidelines and producing diagnostic quality radiographs.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205.

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DES 0206L - Dental Radiology Laboratory II

60 Clock Hours
(Offered as needed)

This laboratory course assists students in additional radiographic performance techniques to include surveys on patients with varied dentitions. Students practice more advanced radiographic exposure techniques, interpretation, additional darkroom procedures, identification of landmarks and distinguishing various radiographic pathology. Clinical radiographic skills necessary to produce diagnostic quality x-rays including but not limited to bitewings, periapical radiographs, and panoramic surveys on actual patients will be covered. Emphasis is placed on patient and operator safety guidelines and producing diagnostic quality radiographs during this course.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L, DES 0205L

Corequisite(s): DEA 0851L.

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approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0324 - Interpersonal Communications Skills

30 Clock Hours
(Offered as needed)

This course is designed to implement interpersonal and effective communication skills in the practice of dentistry. It includes team building strategies, oral and written communications skills with the correct use of terminology commonly used in dentistry. Professionalism in verbal and nonverbal communications is emphasized. Students will be introduced to the legal and ethical scope of responsibilities for dental assistants and interpersonal relations in the dental office. Providing oral health instructions and post operative instructions for patients will be introduced. Scenario-based role playing is used to augment student learning of course content.

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DES 0400 - Dental Anatomy

90 Clock Hours
(Offered as needed)

This course provides a detailed study of the orofacial and related structures of the head and neck including, but not limited to the eruption, identification and function of the human dentition, study of bony, circulatory, muscular and nervous systems of the head, neck and surrounding structures associated with the oral cavity. A brief introduction to oral histology and embryology will be included.

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DES 0501 - Dental Practice Management

60 Clock Hours
(Offered as needed)

This course includes theory and content relating to practical administrative duties performed in the dental office. Lectures and role playing activities are related to the responsibilities of the dental assistant. Topics include but are not limited to appointment scheduling, billing, collections, record keeping, clerical and dental supply inventory. Students are introduced to the use of dental practice software with hands on computer experience. Legal responsibilities, interpersonal relations, and interview skills are included.

Prerequisite(s): DES 0205, DES 0205L

Corequisite(s): DEA 0936.

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DES 0602 - Pharmacology and Dental Office Emergencies

30 Clock Hours
(Offered as needed)

This course is designed to familiarize the dental assisting student with the basic concepts and considerations regarding pharmacology and pharmaceutics used in dentistry. Topics presented include nitrous oxide monitoring, emergency procedures and protocol. Lectures will include recognition of emergency conditions in the dental office, not limited to syncope, anaphylaxis, and cardiovascular incidents. Emphasis is placed on the role of the dental assistant in the prevention and management of dental office emergencies.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0844 - Infection Control for Dental Assistants

30 Clock Hours
(Offered as needed)

This course is a general study in biomedical sciences of preventive dentistry to familiarize the dental assisting student with basic principles of microbiology, basic body structures, and their functions and effects as manifested in the oral cavity. The course also covers the effects of nutrition and the role of microorganisms in dental health and blood borne pathogens.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 1230

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Dental Assisting (PSAV) (DENT)
Fall Semester

DEA 0020 - Pre-Clinical Procedures Theory **60 Clock Hours**

DEA 0020L - Pre-Clinical Practice Lab **90 Clock Hours**

DES 0400 - Dental Anatomy **90 Clock Hours**

DES 0103 - Dental Materials **60 Clock Hours**

DES 0103L - Dental Materials Lab **90 Clock Hours**

DEA 0803L - Clinical Practice I **150 Clock Hours**

DES 0324 - Interpersonal Communications Skills **30 Clock Hours**

DES 0844 - Infection Control for Dental Assistants **30 Clock Hours ***

Total Semester Clock Hours: 450

Spring Semester

DES 0830 - Expanded Function Theory **30 Clock Hours**

DES 0602 - Pharmacology and Dental Office Emergencies **30 Clock Hours**

DES 0830L - Expanded Functions Lab **60 Clock Hours**

DEA 0852L - Clinical Practice II **180 Clock Hours**

DES 0205 - Dental Radiology Lecture **60 Clock Hours**

DES 0205L - Dental Radiology Laboratory I **60 Clock Hours**

DEA 0130 - Oral Pathology **30 Clock Hours**

Total Semester Clock Hours: 420

Summer Semester

DEA 0851L - Clinical Practice III **180 Clock Hours**

DES 0501 - Dental Practice Management **60 Clock Hours**

DEA 0936 - Dental Assisting Seminar **60 Clock Hours**

DES 0206L - Dental Radiology Laboratory II **60 Clock Hours**

Total Semester Clock Hours: 360

Total Program Clock Hours: 1230

* DES0844 may be taken in Fall or Spring Semester

Digital Forensics (CCC)

Admission Program of Study Code DGFO
State CIP Code 0511100119

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology (AS) degree (State CIP Code 1511100112).

Core Courses

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Technical Elective Courses

Select 8 credits from the following:

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four

courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 8

Total Program Credits Required: 32

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Forensics (CCC) (DGFO)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2314C - Network Defense and Countermeasures **3 Credit Hours** CET 2880C - Digital Forensics Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** **Total Semester Hours: 12** **Summer Semester** CET 2881C - Digital Forensics II **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **2 Credit Hours** **Total Semester Hours: 8**
Total Program Hours: 32

Digital Manufacturing Specialist (CCC)

Admission Program of Study Code DMFS
State CIP Code 0615000009

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid

prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Digital Manufacturing Specialist (CCC) (DMFS)
Fall Semester ETD 2357C - Inventor I **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** PMT 1203C - Introduction to Machining **3 Credit Hours - Offered at Night Only** PMT 1250C - Introduction to CNC Machining **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester PMT 2261C - CNC Machining I **3 Credit Hours Offered at Night Only** ETD 2371C - 3D Printing I **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester PMT 2262C - CNC Machining II **3 Credit Hours Offered at Night Only** ETD 2372C - 3D Printing II **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 24

Digital Media/Multimedia Authoring (CCC)

Admission Program of Study Code DMMA
State CIP Code 0609070209

Students who successfully complete this diploma may be eligible to receive credits towards the Digital Media/Multimedia Technology (AS) degree (State CIP Code 1611080102).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 14

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Authoring (CCC) (DMMA)

Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** **Total Semester Hours: 7**
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** T**otal Semester Hours: 7**
Total Program Credits: 14

Digital Media/Multimedia Presentation (CCC)

Admission Program of Study Code DMMP
State CIP Code 0609070219

Students who successfully complete this diploma may be eligible to receive credits towards the Digital Media/Multimedia Technology (AS) degree (State CIP Code 1611080102).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Presentation (CCC) (DMMP)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours**

ART 2602C - Digital Imaging I **4 Credit Hours** **Total Semester Hours: 11**
Spring Semester CGS 2820 - Web Design **3 Credit Hours** GRA 2140C - Multimedia I **4 Credit Hours** **Total Semester Hours: 7**
Total Program Hours: 18

Digital Media/Multimedia Technology (AS)

Admission Program Objective Code DMMT
State CIP Code 1611080103

The Digital Media/Multimedia programs are intended for students interested in working in commercial art fields that include electronic publishing, digital video production, and website development.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Digital Media/Multimedia Authoring (CCC) (State CIP Code 0609070209) and/or Digital Media/Multimedia Presentation (CCC) (State CIP Code 0609070209).

Students are encouraged, but not required, to contact Digital Media faculty at 729-6019 for detailed advising to plan a program of study before enrolling in courses.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking

this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2141C - Multimedia II

4 Credit Hours
(Offered as needed)

An advanced course covering principles of design and information architecture surrounding interactive multimedia presentations. Students will learn an industry standard interactive DVD media authoring software application. Students will produce a finished interactive DVD.

Prerequisite(s): GRA 2140C.

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits (GRA, PGY) _

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Technology (AS) (DMMT)	Companion Certificate*	
First Year	DMMA	DMMP
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education 3 **Credit Hours** Additional General Education **2 Credits** **Total Semester Hours: 15**	√ √	√ √
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** ARH 1000 - Art Appreciation **3 Credit Hours ❖ † ♦ ¶** GRA 2190C - Graphic Design I **3 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** **Total Semester Hours: 14**	√	√
Summer Semester Social Science General Education **3 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** **Total Semester Hours: 7**		
Second Year		
Fall Semester GRA 2140C - Multimedia I **4 Credit Hours** ART 2603C - Digital Imaging II **4 Credit Hours** Science General Education **4 Credit Hours**	√	√ √

Total Semester Hours: 12		
Spring Semester CGS 2820 - Web Design **3 Credit Hours** GRA 2141C - Multimedia II **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** PGY 2221C - Commercial Photography II **4 Credit Hours** **Total Semester Hours: 12**	√	√
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: DMMA - Digital Media/Multimedia Authoring (CCC) DMMP - Digital Media/Multimedia Presentation (CCC)		

Early Childhood Education (AS)

Admission Program Objective Code ECED
State CIP Code 1413121004

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Child Development Early Intervention (CCC) (State CIP Code 0419070904), Child Care Center Management Specialization (CCC) (State CIP Code 0419070906), Infant/Toddler Specialization (CCC) (State CIP Code 0419070907), and/or Preschool Specialization (CCC) (State CIP Code 0419070908).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1401 - The Family In Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

This course is comprehensive in scope, emphasizing skills and concepts of parenting which include: adjustment to parental roles; parent-child communication, care, growth, and development of children; cultivating strong families; special concerns; alternative family structures; educational institutions working effectively with parents; and agencies and legislation affecting children and parents.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Early Childhood Education (AS) (ECED)	Companion Certificates*			
First Year	CDEI	CCCM	CITS	CCPS

Fall Semester EEC 1001 - Introduction to Early Childhood Ed **3 Credit Hours** EEC 1309 - Early Childhood Education Foundations **3 Credit Hours** EEC 1201 - Infants and Toddlers **3 Credit Hours** EEX 2010 - Introduction to Exceptional Children **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 15**	 √ √ √ √	 √ √	 √ √	 √ √
Spring Semester DEP 2100 - Child Growth and Development **3 Credit Hours** EEC 1949 - Internship, Early Childhood Education **3 Credit Hours** EEC 1401 - The Family In Early Childhood Education **3 Credit Hours** Mathematics General Education **- 3 Credit Hours** **Total Semester Hours: 12**	 √ √	 √	 √ √	 √ √
Summer Semester Science General Education **- 4 Credit Hours** Humanities General Education - **3 Credit Hours** **Total Semester Hours: 7**				
Second Year				
Fall Semester EEC 1601 - Assessment in Early Childhood Education **3 Credit Hours** EEC 2732 - Child Nutrition, Health and Safety **3 Credit Hours** EEC 1750 - Guidance for Young Children **3 Credit Hours** EEC 2220 - Language and Literacy Instruction In Early Childhood Education **3 Credit Hours** Additional General Education Credits **- 2 Credit Hours**	 √ √ √			

Total Semester Hours: 14				
Spring Semester EEC 1002 - Early Childhood Program Administration **3 Credit Hours** EDF 1005 - Introduction to the Teaching Profession **3 Credit Hours** EEC 2222 - Math & Sci Instruction Early Child Ed **3 Credit Hours** Social Science General Education - **3 Credit Hours** **Total Semester Hours: 12**	√ √	√		
Total Program Hours: 60				
* Courses with √ can also be used in the Companion Certificate indicated: CDEI - Child Development Early Intervention (CCC) CCCM - Child Care Center Management Specialization (CCC) CITS - Infant/Toddler Specialization (CCC) CCPS - Preschool Specialization (CCC)				

Early Childhood Education, Birth through Four (BS)

Admission Program Objective Code BSEB
State CIP Code 1101312102

The Bachelor of Science in Early Childhood Education, Birth through Four is designed to prepare students to work in programs serving children ages 0-4 years. Graduates will be prepared for advancement in the Early Childhood career field. The degree offers a career ladder for students earning the Associate of Science in Early Childhood Education at NWF State College, which includes one state-mandated prerequisite courses. A.S. students will complete an additional 18 hours of General Education classes during their upper division coursework, after admission to the Early Childhood Education program. Students earning an A.A. may also enter this program after completing the state-mandated prerequisite courses. These students will complete technical classes during their upper division coursework after admission to the Early Childhood Education program. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements.

Lower Division Requirements

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

Students entering with an A.S. or A.A.S. degree will have 18 General Education hours and will complete the remaining 18 within the B.S. in Early Childhood coursework.

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶** (meets 3 hours of diversity credits)
- _____ _____ - Core Humanities **3 Credit Hours**
- MGF 1106 - Practical Applications of Mathematics or other Core Mathematics **3 Credit Hours ♦**
- ___ ___ - General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- WOH 1012 - World Civilization I **3 Credit Hours ❖ ¶** ** OR WOH 1022 - World Civilization II **3 Credit Hours ❖ ¶** **(meets 3 hours of diversity credits)
- SYG 2000 - Sociology **3 Credit Hours ❖ ♦** **(meets 3 hours of diversity credits)
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

State-Mandated Prerequisites

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

Total State-Mandated Prerequisite Credits Required: 3

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM

2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000.

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements

Program Content Courses

Students entering with an A.S. or A.A.S. degree will complete 18 General Education hours within the B.S. in Early Childhood coursework. Students entering with an A.A. degree will complete 18 hours of Early Childhood technical coursework within the B.S. in Early Childhood, in accordance with a signed program of study designed by a program advisor.

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEC 3213 - Teaching the Language Arts In Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on the development of language and literacy in children ages birth through age four. Emphasis will be placed on understanding the process of emergent literacy including vocabulary and language, phonological awareness, print knowledge and comprehension; and on designing a developmentally appropriate language arts program in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3227 - Art, Music, and Movement

3 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of the creative developmental process in the life of children from birth through four years old. Emphasis will be placed on the teacher's role in developing opportunities and materials for young children to express themselves creatively through music, drama, dance and two- and three-dimensional art and on providing varied opportunities for young children to gain an appreciation of art, music, drama, and dance in ways that reflect cultural diversity in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies

3 Credit Hours
(Offered as needed)

This course is designed to prepare students to teach social studies In the early childhood classroom. Emphasis is on implementing the project approach to investigate components of social studies to include: individual development and identity; people, places, and environments, technology and our world; and civic ideals and practices. The student will increase and apply knowledge and skills in the Florida Early Learning and Developmental Standards relevant to this content area.

EEC 3511 - Curriculum for Infants and Toddlers

3 Credit Hours
(Offered as needed)

The focus of this course will be on the design, implementation and evaluation of programming and curriculum that promotes growth and development of young children birth to three years old and aligns with the early learning and developmental standards. Study of typical and atypical development will be included. Emphasis will be on working effectively with families of infants and toddlers.

EEC 3524 - Professionalism/Program Development

4 Credit Hours
(Offered as needed)

Focus of this course will be on management and leadership in early childhood education programs. Topics will include mentoring adults, professional development, staff assessment, program evaluation, and child advocacy. Career options in the field of early childhood education will be explored. This course will require observing and participating in a program or agency related to early childhood education.

EEC 4404 - Families and Diversity

3 Credit Hours
(Offered as needed)

This course will focus on building positive relationships with families through communication and involvement. Focus will include developing an awareness of diversity and multicultural considerations in working with families of young children. The course will explore the role of the family and the influence of the community on the development of young children in a diverse society; and will prepare the student to work effectively with families and communities.

EEC 4421 - Teaching Math and Science in Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of how concepts, skills and attitudes in early childhood mathematics and science are developed in young children ages birth through age four. Math topics will include number sense and operations, patterns, geometry, and measurement. Science topics will include scientific inquiry, physical science, life science and earth science. Emphasis will be on the alignment of the Early Learning and Developmental Standards with a developmentally appropriate approach to teaching math and science in the early childhood classroom. This course will require observing and participating in an early childhood classroom.

EEC 4613 - Systematic Observation and Assessment

3 Credit Hours
(Offered as needed)

The focus of this course will be on understanding the purpose of child assessment, implementing developmentally appropriate practices in formal and informal child assessment, and using assessment results to support learning, to identify special needs, to evaluate programs, and to respond to program accountability requirements. A field experience is required to practice various methods of assessment in an early childhood setting.

EEC 4940 - Internship

9 Credit Hours
(Fall, Spring)

Supervised teaching in an assigned Early Childhood Education setting. Student teaching assignments will be made by the Department of Teacher Education Office. This course requires a minimum grade of "C". Current background check (fingerprinting) is required for this course.

Prerequisite(s): Upper Division standing with permission of Department Chair

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEX 3604 - Classroom Management in Early Childhood Education

3 Credit Hours
(Offered as needed)

The focus of this course is on implementing effective classroom management practices including establishing an appropriate physical environment, setting up appropriate classroom routines and rules and creating a positive classroom community. Emphasis will be on strategies for guiding children's behavior, teaching social problem-solving skills and responding appropriately to challenging behaviors.

EEX 4201 - Young Children with Special Needs

3 Credit Hours
(Offered as needed)

The focus of this course will be on working with young children birth through age four in an inclusive early childhood classroom. Emphasis will be on identifying typical and atypical development, creating an inclusive early childhood learning environment, understanding special education law, developing an awareness of resources for inclusive practice to meet the needs of young children and their families.

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Early Childhood Education, Birth through Four (BS) (BSEB) - For students admitted with an AS degree

First Year

Fall Semester

EEC 3227 - Art, Music, and Movement **3 Credit Hours**

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies **3 Credit Hours**

General Education Course **3 Credit Hours**

General Education Course **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

EEC 4404 - Families and Diversity **3 Credit Hours**

EEC 3511 - Curriculum for Infants and Toddlers **3 Credit Hours**

EEC 3524 - Professionalism/Program Development **4 Credit Hours**

EEC 3213 - Teaching the Language Arts In Early Childhood Education **4 Credit Hours**

Total Semester Hours: 14

Summer Semester

EEX 4201 - Young Children with Special Needs **3 Credit Hours**

EEC 4421 - Teaching Math and Science in Early Childhood Education **4 Credit Hours**

General Education Course **3 Credit Hours**

Total Semester Hours: 10

Second Year

Fall Semester

EEC 4613 - Systematic Observation and Assessment **3 Credit Hours**

General Education Course **2 Credit Hours**

General Education Course **4 Credit Hours**

Total Semester Hours: 12

Spring Semester

EEC 4940 - Internship **9 Credit Hours**

General Education Course **3 Credit Hours**

Total Semester Hours: 12

Total Upper Division Program Hours: 60

Early Childhood Education, Birth through Four (BSEB) - For students admitted with an AA degree

First Year

Fall Semester

EEC 3227 - Art, Music, and Movement **3 Credit Hours**

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies **3 Credit Hours**

EEC 2732 - Child Nutrition, Health and Safety **3 Credit Hours**

EEC 1201 - Infants and Toddlers **3 Credit Hours**

EEX 2010 - Introduction to Exceptional Children **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

EEC 4404 - Families and Diversity **3 Credit Hours**

EEC 3511 - Curriculum for Infants and Toddlers **3 Credit Hours**

EEC 3524 - Professionalism/Program Development **4 Credit Hours**

EEC 3213 - Teaching the Language Arts In Early Childhood Education **4 Credit Hours**

Total Semester Hours: 14

Summer Semester

EEX 4201 - Young Children with Special Needs **3 Credit Hours**

EEC 4421 - Teaching Math and Science in Early Childhood Education **4 Credit Hours**

DEP 2100 - Child Growth and Development **3 Credit Hours**

Total Semester Hours: 10

Second Year

Fall Semester EEC 4613 - Systematic Observation and Assessment **3 Credit Hours** EEC 1002 - Early Childhood Program Administration **3 Credit Hours** EEC 1750 - Guidance for Young Children **3 Credit Hours** EEX 3604 - Classroom Management in Early Childhood Education **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester EEC 4940 - Internship **9 Credit Hours** **Total Semester Hours: 9**
Total Upper Division Program Hours: 60

Elementary Education (BS)

Admission Program Objective Code BSED
State CIP Code 1101312021

The first sixty credits in the following program of study are designed to prepare students not only for the A.A. degree, but also for the General Knowledge exam and Elementary Subject Area exam of the Florida Teacher Certification Exam (FTCE).

If you plan to be an elementary school teacher and are just beginning your A.A. degree, this program of study will best prepare you for that career choice. If you have already completed your A.A. degree and some of your general education courses differ from those listed below, your A.A. degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the FTCE Elementary Subject Area exam. A passing score on the FTCE Elementary Subject Area exam is one of the graduation requirements for this degree. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Courses with the "C" designation include extra hours to accommodate field experiences.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements. Requirements for Teacher Education programs may change due to legislative mandate. Candidates should request the most current requirements from the Teacher Education Program Director.

Lower Division (Associate Degree) Courses

Specific General Education and lower division courses are recommended because these courses meet NWF State College general education requirements and cover state content competencies tested on the Elementary Education K-6 subject area section of the Florida Teacher Certification Exams (FTCE), which all students must pass before entering the final internship semester in the Bachelor of Science in Elementary Education Program.

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶** recommended or other Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- MAC 1105 - College Algebra recommended or other Core Mathematics **3 Credit Hours ♦**
- MGF 1106 - Practical Applications of Mathematics recommended or other General or Core Math **3 Credit Hours ♦**
- BSC_ ____ - General Education Biological Sciences **3 Credit Hours*** (BSC1010C strongly recommended due to FTCE subject area content)
- WOH ____ - World Civilization **3 Credit Hours****
- ECO 2013 - Economics I **3 Credit Hours ♦** **
- PHY 1020 - Physical Science **3 Credit Hours ♦**
- POS 1041 - American Government **3 Credit Hours ♦ ¶**
- AMH 2010 - American History I **3 Credit Hours ¶ or** AMH 2020 - American History II **3 Credit Hours ♦ ¶**

It is recommended that at least one physical or biological science include a lab.

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

At least 6 hours of diversity credits should be included in General Education required credits.

Total General Education Credits Required: 36

State-Mandated Prerequisite

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

Total State-Mandated Prerequisite Credits Required: 3

Additional Lower Division Coursework

AST ____ - Astronomy **3 Credit Hours**

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY ____ - Geological Science **4 Credit Hours**

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an

introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

Total Additional Lower Division Credits Required: 21

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000, SYG 2010, WOH 1012, WOH 1022

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Courses

Program Content Courses

EDE 4223 - Integrating Art, Music, and Physical Education

3 Credit Hours
(Summer)

This integrative course provides students with critical understanding of art, music, and physical education. Emphasis is placed on the effective integrative lesson planning and modeling techniques to art, music, and physical education in elementary schools. This course requires a minimum grade of "C".

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4226C - Integrated Language Arts, Social Science and Literature

3 Credit Hours
(Fall, Spring)

This course is designed to prepare candidates to teach language arts and social science in elementary classrooms. Teacher candidates will develop units of study that integrate literature, language arts, with social science content. Emphasis is on constructivist principles and methodology. Teacher candidates will plan and deliver standards-based language arts and social science lessons designed to meet the needs of diverse learners including English language learners (ELLs) and students with exceptionalities. This course requires 18 hours of field experience in a K-6 classroom setting. Current background check (fingerprinting) acceptable to the district in which the field experience will take place is required for this course. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4930C - Seminar in Elementary Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace. Includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 4940 - Internship

9 Credit Hours
(Offered as needed)

Supervised teaching in a public or private school. Student teaching assignments will be made by the department of teacher education field placement coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing with permission of department chair.
EDE 4223, EDE 4226C, EDF 3214, EDF 3430, EDG 3410C, EDG 3343, EEX 3070, LAE 4343C, MAE 3350C, RED 3309C, RED 3511C, RED 4312, RED 4519C, SCE 3350C, TSL 3081C, TSL 4140C

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

LAE 4343C - Writing Across the Curriculum

3 Credit Hours
(Offered as needed)

This course prepares pre-service teachers by developing an understanding of the foundations of writing through the use of writers workshops and instructional strategies necessary to provide adequate instruction to emergent, novice, and transitional writers. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3309C - Early and Emergent Literacy K-2

3 Credit Hours
(Fall, Spring)

This course is designed to increase the understanding of early literacy development and the conditions which promote total literacy from birth through lower elementary grades. Language theory and current research are used to shape informed practices regarding literacy development. Connections are made among all aspects of literacy learning: reading, writing, listening, speaking and attitude development. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4312 - Integration of Assessment into Classroom Reading

3 Credit Hours
(Summer)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on integrating assessments into the curriculum to strengthen instructional strategies and student success. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): RED 3309C, RED 3511C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4519C - Diagnostic and Instructional Interventions in Reading

3 Credit Hours
(Fall, Spring)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on diagnosis of reading problems, administration of assessments, evaluation of results and planning instructional interventions to remediate reading difficulties. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4854C - Reading Field Experience

2 Credit Hours
(Fall, Spring)

This course provides application of knowledge of reading development to reading instruction. Emphasis is placed on increased reading proficiency for struggling students, including students with disabilities and students from diverse populations. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C, RED 4312, RED 4519C, upper division standing with permission of department chair

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 4140C - ESOL Methods, Curriculum and Assessment

3 Credit Hours
(Fall, Spring)

This course is designed to build on the candidate's knowledge of applied linguistics and cross cultural communication. Candidates will extend their understanding of the role of language and culture in the classroom. This course will prepare candidates for effective planning, instruction, and assessment of ELLs in the classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): TSL 3081C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Elementary Education (BS) (BSED)

First Year

Fall Semester

EDG 3343 - Instructional Strategies **3 Credit Hours**

EDG 3410C - Classroom Management, School Safety, Law, and Ethics **3 Credit Hours**

TSL 3081C - TESOL Issues and Practice **3 Credit Hours**

RED 3309C - Early and Emergent Literacy K-2 **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

EDF 3430 - Measurement, Evaluation, and Assessment in Education **3 Credit Hours**

LAE 4343C - Writing Across the Curriculum **3 Credit Hours**

TSL 4140C - ESOL Methods, Curriculum and Assessment **3 Credit Hours**

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking **3 Credit Hours**

Total Semester Hours: 12

Summer Semester

EDE 4223 - Integrating Art, Music, and Physical Education **3 Credit Hours**

EDF 3214 - Human Development and Learning **3 Credit Hours**

EEX 3070 - Methods of Inclusion and Collaboration **3 Credit Hours**

RED 4312 - Integration of Assessment into Classroom Reading **3 Credit Hours**

Total Semester Hours: 12

Second Year

Fall Semester

EDE 4226C - Integrated Language Arts, Social Science and Literature **3 Credit Hours**

MAE 3350C - Principles and Methods for Teaching Mathematics K-8 **3 Credit Hours**

SCE 3350C - Principles and Methods for Teaching Science K-8 **3 Credit Hours**

RED 4519C - Diagnostic and Instructional Interventions in Reading **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester EDG 4940 - Internship **9 Credit Hours** EDE 4930C - Seminar in Elementary Education **1 Credit Hour** RED 4854C - Reading Field Experience **2 Credit Hours** **Total Semester Hours: 12**
Total Upper Division Program Hours: 60

Emergency Administration & Management (AS)

Admission Program Objective Code EAMT
State CIP Code 1743030200

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Emergency Administrator & Manager (CCC) (State CIP Code 0743030201) and/or Homeland Security Emergency Manager (CCC) (State CIP Code 0743030202).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits 3 **Credit Hours**

Total General Education Credits Required: 18

Core Courses

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

FFP 2823 - Technical Applications in Emergency Management

3 Credit Hours
(Offered as needed)

This course explores issues and problems associated with the use of technology in emergency management. It examines strategies to overcome these issues and problems. Some of the subjects treated are use of the Internet, spatial analysis applications in vulnerability analysis, decision support systems, and emerging technologies.

FFP 2841 - Contingency Planning for the Private Sector

3 Credit Hours
(Offered as needed)

This course is designed to assist students in developing effective public sector plans by using the National Incident Management System and the Incident Command System templates. The curriculum includes case studies and development procedures for private sector logistics management and employee support planning.

FFP 2834 - Societal Issues in Disaster Management

3 Credit Hours
(Offered as needed)

This course examines human response to disaster events, including political and economic factors influencing vulnerability. It examines how individuals and institutions make decisions at all levels of disaster response, it is an introduction to current research pertaining to the sociological aspects of disaster, and it will provide increased awareness of the potential and difficulties in using social science research as a basis for modifying public policy.

Total Core Credits Required: 15

Technical Elective Courses

Select 27 credits from the following:

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The

course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention

inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) _

Total Technical Elective Credits Required: 27

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Emergency Administration & Management (AS) (EAMT)	Companion Certificates*	
First Year	ENAM	HSEM
Fall Semester FFP 1801 - Introduction to Emergency Management Administration **3 Credit Hours** FFP 2820 - Emergency Preparedness **3 Credit Hours** General Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Spring Semester Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** General Education Course **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Second Year		
Fall Semester FFP 2823 - Technical Applications in Emergency Management **3 Credit Hours**		

FFP 2841 - Contingency Planning for the Private Sector **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Spring Semester FFP 2834 - Societal Issues in Disaster Management **3 Credit Hours** Technical Education Course **3 Credit Hours** General Education Course **3 Credit Hours** General Education Course **4 Credit Hours** General Education Course **2 Credit Hours** **Total Semester Hours: 15**		
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: ENAM - Emergency Administrator and Manager (CCC) HSEM - Homeland Security Emergency Manager (CCC)		

Emergency Administrator & Manager (CCC)

Admission Program of Study Code EMAM
State CIP Code 0743030201

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) (State CIP Code 1743030200).

Core Courses

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) **3 Credit Hours**

Total Core Credits Required: 24

Total Program Credits Required: 24

Emergency Medical Services (AS)

Admission Program Objective Code EMSR
State CIP Code 1351090402

This curriculum forms the last stage of a career ladder program progression from Emergency Medical Technician (CCC) (State CIP Code 0351090415) to Paramedic (CCC) (State CIP Code 0351090405) to Emergency Medical Services (AS) degree.

Students interested in pursuing this program must have a current and active Florida Bureau of Emergency Medical Services EMT/Paramedic licensure. Contact the Emergency Services/Paramedic program at (850) 729-4924 for more information.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences 3 **Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

*** BSC 2020C (from Paramedic Core) may be used to meet GE Science.**

EMT Certificate Courses

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

Total EMT Credits Required: 12

Paramedic Certificate Core Courses

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

EMS 1335 - Emergency Vehicle Operators Course

1 Credit Hour
(Offered as needed)

Students receive basic education and information on the safe and effective operation of emergency vehicles.

Prerequisite(s): permission of the EMS Program Director.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if

applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Paramedic Credits Required: 43

Total Program Credits Required: 73

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Emergency Medical Services (AS) (EMSR)	Companion Certificates*	
First Year	EMTB	EMPM
Summer Semester		
EMS 1119C - Emergency Medical Technician **6 Credit Hours**	√	
EMS 1335 - Emergency Vehicle Operators Course **1 Credit Hour**	√	
EMS 1401L - EMT Lab **6 Credit Hours**	√	
HSC 1531 - Medical Terminology **3 Credit Hours**		√
Total Semester Hours: 14		
Fall Semester		
BSC 2020C - Human Structure and Function **4 Credit Hours**		√
EMS 2231C - Paramedic Processes I **5 Credit Hours**		√
EMS 2435L - Paramedic Lab I **5 Credit Hours**		√
EMS 2552 - Advanced Cardiac Life Support (ACLS) **1 Credit Hour**		√
EMS 1337 - Defensive Tactics **1 Credit Hour**		√
Total Semester Hours: 16		
Spring Semester		

EMS 2232C - Paramedic Processes II **5 Credit Hours** EMS 2436L - Paramedic Lab II **5 Credit Hours** EMS 2526 - Twelve-Lead EKG Interpretation **1 Credit Hour** EMS 2553 - Pediatric Advanced Life Support (PALS) **1 Credit Hour** EMS 2555 - International Trauma Life Support (ITLS) **1 Credit Hour** Elective - CCJ, EMS, FFP - **3 Credit Hours** **Total Semester Hours: 16**		√ √ √ √ √
Second Year		
Summer Semester EMS 2438C - Advanced Clinical Internship **2 Credit Hours** EMS 2233 - Paramedic Processes III **2 Credit Hours** EMS 2425L - Paramedic Externship **4 Credit Hours** EMS 2342 - Advanced Extrication **1 Credit Hour** DSC 2055 - Issues in Disaster Response **1 Credit Hour** General Education Course - **3 Credit Hours** **Total Semester Hours: 13**		 √ √ √ √
Fall Semester General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **2 Credit Hours** Total Semester Hours: 14		
Total Program Hours: 73		
* Courses with √ can also be used in the Companion Certificate indicated: EMTB - Emergency Medical Technician (Basic) (CCC) EMPM - Paramedic (CCC)		

Emergency Medical Technician (CCC)

Admission Program of Study Code EMTN
State CIP Code 0351090415

Admission will be through a Limited Access application process. Graduates of this program will be eligible to apply for the examination to become a Florida certified Emergency Medical Technician and a National Registry Emergency Medical Technician Basic. Students interested in pursuing this program should contact the Emergency Medical Services Office at (850) 729-4924.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Medical Services (AS) degree (State CIP Code 1351090402).

Core Courses

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

Total Program Credits Required: 12

Engineering Technology - Digital Design & Modeling Specialization Option (AS)

Admission Program Objective Code ETDD
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This

degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Computer-Aided Design and Drafting (CCC) (State CIP Code 0615000004), Rapid Prototyping Specialist (CCC) (State CIP Code 0615000012) and/or Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties,

functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic

properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Digital Design & Modeling Specialization Option (AS) (ETDD)	Companion Certificates*		
First Year	CADD	RAPP	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours - Online Only** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours - Night Only** **Total Semester Hours: 15**			 √ √
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours**	 √ √		 √ √

ETD 2150 - Industrial Print Reading **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Second Year			
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** ETI 1420 - Properties Materials/Cutting Tools **3 Credit Hours - Online Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	√
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: CADD - Computer-Aided Design and Drafting (CCC) RAPP - Rapid Prototyping Specialist (CCC) ETSS - Engineering Technology Support Specialist (CCC)			

Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS)

Admission Program Objective Code ETDM
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and

Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007), Digital Manufacturing Specialist (CCC) (State CIP Code 0615000009), and Rapid Prototyping Specialist (CCC) (State CIP code 0615000012) certificates.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling,

optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and

machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) (ETDM)	Companion Certificates*		
First Year	ETTS	DMFS	RAPP

Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours** **Total Semester Hours: 15**	√	√ √	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	
Second Year **Fall Semester** PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** ETI 1420 - Prop of Materials/Cutting Tools **3 Credit Hours - Online Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science **3 Credit Hours**	√	√ √	√

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC) DFMS - Digital Manufacturing Specialist (CCC) RAPP - Rapid Prototyping Specialist (CCC)			

Engineering Technology - Electronics Specialization Option (AS)

Admission Program Objective Code ETES
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the five specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, Digital Manufacturing and Electronics with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hours core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.
Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading

achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and

inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Required Courses

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

EET 1141C - Solid State Electronics

3 Credit Hours
(Fall, Spring)

This is the third course required for Electronics Aide certificate. This course introduces the student to the concept, components, and uses of solid state electronics. Topics include semiconductor devices; thyristors and diodes, transistors, amplifiers, power supplies, oscillators, and optoelectronics. The use of capacitors and inductors in solid state electronics will be also covered. The design, set-up, and troubleshooting solid state circuits and devices using various power supplies and function generators will be dispersed throughout the class.

Prerequisite(s): EET 1025C

EET 1180C - Industrial Electronic Troubleshooting

3 Credit Hours
(Fall, Spring)

This course covers troubleshooting procedures for a variety of electronic equipment and circuits common to industrial applications. The student will develop and implement trouble shooting protocols and plans, equipment monitoring plans, a preventive maintenance plan, and select appropriate test and monitoring equipment. Safety in an industrial setting will be stressed and reinforced through a series of lab exercises throughout the course.

Prerequisite(s): EET 1084C

EET 2155C - Linear Integrated Circuits

3 Credit Hours
(Fall, Spring)

This course covers the fundamentals and applications of linear integrated circuits and operational amplifiers. The course covers includes inverting and non-inverting amplifiers, comparators, signal generators, differential and instrumentation amplifiers, operational amplifier specifications, active filters, modulator-demodulator integrated circuits, timers, analog to digital converters (ADC), and digital to analog converters (DAC) and measurement and analysis of linear circuits and devices.

Prerequisite(s): EET 1015C, EET 1025C

Total Technical Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Electronics Specialization Option (AS) (ETES)	Companion Certificate*
First Year	ETSS
Fall Semester	
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**	
ETI 1710 - Occupational Safety **3 Credit Hours - Offered Online Only**	
SLS 2505 - Critical Thinking **3 Credit Hours**	√
ETD 1320C - AutoCAD I **3 Credit Hours**	√
EET 1084C - Introduction to Electronics **3 Credit Hours -Offered at Night Only**	

Total Semester Hours: 15	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** EET 1015C - Electricity/Electronics I, DC Circuits **3 Credit Hours - Offered at Night Only** ETD 2150 - Industrial Print Reading **3 Credit Hours** **Total Semester Hours: 15** **Second Year**	√ √
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** EET 1180C - Industrial Electronic Troubleshooting **3 Credit Hours** ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Online Only** EET 1025C - Electricity/Electronics II, AC Circuits **3 Credit Hours - Offered at Night Only** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** **Total Semester Hours: 15**	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science **3 Credit Hours** EET 1141C - Solid State Electronics **3 Credit Hours** EET 2155C - Linear Integrated Circuits **3 Credit Hours** **Total Semester Hours: 15**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC)	

Engineering Technology - Maintenance Technician Specialization Option (AS)

Admission Program Objective Code ENMT
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. Instruction in electrical/electronic principles, basic mechanic fundamentals, robotics and machine repair prepare the student to meet the demands and develop the skills required to maintain and troubleshoot high-tech manufacturing equipment. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality. Candidates interested in this program should be interested in working with their hands and enjoy the challenges of programming and troubleshooting electrical and mechanical equipment.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected core courses from this program of study may be eligible to receive the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007) certificate.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Required Courses

EEL 2603C - Robotics-Mechanics and Controls

3 Credit Hours
(Fall)

This course introduces the student to robotics. Instructional topics will include robot classifications, applications, Input/Output (I/O) and sensor interfacing.

Prerequisite(s): ETS 1542C

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

ETM 1315C - Hydraulics & Pneumatics Fundamentals

3 Credit Hours
(Spring)

This course introduces the student to basic hydraulic and pneumatic fundamentals. Instructional topics will include components, fluid pressure and flow and basic circuit design and application.

ETS 1542C - Introduction to Programmable Logic Controllers

3 Credit Hours
(Fall)

This is an introductory course in Programmable Logic Controllers (PLCs.) The student will learn basic concepts with a focus on programming and practical applications.

Prerequisite(s): EET 1084C

Total Technical Credits Required: 15

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Maintenance Technician Specialization Option (ENMT)	Companion Certificate*
First Year	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** EET 1015C - Electricity/Electronics I, DC Circuits **3 Credit Hours** **Total Semester Hours: 15**	
Second Year	
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours**	

ETI 1420 - Properties of Materials and Processes **3 Credit Hours**	√
EET 1025C - Electricity/Electronics II, AC Circuits **3 Credit Hours**	√
ETS 1542C - Introduction to Programmable Logic Controllers **3 Credit Hours**	
Total Semester Hours: 15	
Spring Semester	
ETI 2110 - Total Quality Tools **3 Credit Hours**	
PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**	√
Social Science General Education **3 Credit Hours**	
EEL 2603C - Robotics-Mechanics and Controls **3 Credit Hours**	
ETM 1315C - Hydraulics & Pneumatics Fundamentals **3 Credit Hours**	
Total Semester Hours: 15	
Total Program Credits: 60	
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC)	

Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS)

Admission Program Objective Code ETMD
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the CNC Machinist/Fabricator (CCC) (State CIP Code 0615080502), the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to

meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2905 - Independent Study – Drafting

1 Credit Hour
(Fall, Spring, Summer)

Practical treatment of special geometry, graphics, and design with emphasis on individual work projects utilizing such graphical techniques as orthographic projection, perspective drawing, auxiliary views, topographic drawing, and graphing.

Prerequisite(s): EGN 1111C and ETD 1112 or permission of instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
* This course may be taken up to four times for credit.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

ETI 2419C - Advanced Concepts of CNC Machines and CNC Machining Practices

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with advanced concepts in CNC machines and CNC machining to include: theory, operation, setup, safety, and practices.

Prerequisite(s): PMT 2261C or PMT 2262C

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe

operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Mechanical Design and Fabrication Specialization Option (AS) (ETMD)	Companion Certificate*	
First Year	CNMM	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		

ETI 1710 - Occupational Safety **3 Credit Hours**		
SLS 2505 - Critical Thinking **3 Credit Hours**		√
ETD 1320C - AutoCAD I **3 Credit Hours**	√	
EET 1084C - Introduction to Electronics **3 Credit Hours**		
Total Semester Hours: 15		
Spring Semester		
ETD 2150 - Industrial Print Reading **3 Credit Hours**		√
ENC 2210 - Technical Report Writing **3 Credit Hours**		√
ETM 1005C - Basic Mechanical Operations **3 Credit Hours**		
MAC 1105 - College Algebra **3 Credit Hours** ♦		
Technical Elective **3 Credit Hours**		
Total Semester Hours: 15		
Second Year		
Fall Semester		
ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Online Only**		√
ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours**		√
PHY 1020 - Physical Science **3 Credit Hours** ♦		
Technical Elective **3 Credit Hours**	√	
Technical Elective **3 Credit Hours**		
Total Semester Hours: 15		
Spring Semester		
PHI 2600 - Introduction to Ethics **3 Credit Hours** ❖ † ¶		√
ETI 2110 - Total Quality Tools **3 Credit Hours**		
Social Science General Education **3 Credit Hours**	√	
Technical Elective **3 Credit Hours**		
Technical Elective **3 Credit Hours**		

Total Semester Hours: 15		
Total Program Hours : 60		
* Courses with √ can also be used in the Companion Certificate indicated: CNMM - CNC Machinist/Fabricator (CCC) ETSS - Engineering Technology Support Specialist (CCC)		

Engineering Technology Support Specialist (CCC)

Admission Program of Study Code ETSS
State CIP Code 0615000007

Students who successfully complete this certificate may be eligible to receive credits towards one of the Engineering Technology (AS) degree (State CIP Code 1615000001) specializations: Engineering Technology - Electronics Specialization Option (AS), Engineering Technology - Maintenance Technician Specialization Option (AS), Engineering Technology - Digital Design & Modeling Specialization Option (AS), Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) or Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS) .

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams,

histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology Support Specialist (CCC) (ETSS)
Fall Semester EET 1084C - Introduction to Electronics **3 Credit Hours - Offered at Night Only** ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Offered Online Only** ETI 1710 - Occupational Safety **3 Credit Hours - Offered Online Only**

Total Semester Hours: 9
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Event Planning Management (CCC)

Admission Program of Study Code (EPMG)

State CIP Code 0252090905

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Event Planning Management (CCC) (EPMG)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** HFT 2210 - Hospitality Management **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Total Semester Hours: 24

Fire Officer Supervisor (CCC)

Admission Program of Study Code FSUP

State CIP Code 0743020111

Earning this certificate increases management skills for professionals employed as Fire Fighters. The purpose of this certificate is to prepare students for employment as Firefighting and Prevention Supervisors to supervise Fire Fighters who control and extinguish fires, protect life and property, and conduct rescue efforts. The program is beneficial to professionals seeking career field enhancement. This program does not prepare students for certification as Fire Fighters. A student must successfully complete the basic recruit program in firefighting to become certified, pursuant to Chapter 633, Florida Statutes. This program does not complete the requirements to be eligible to sit for Bureau of Fire Standards and Training (BFST) certification exams. A student must contact the Bureau of Fire Standards and Training (BFST) for additional requirements.

Core Courses

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

Total Program Credits Required: 12

Fire Science Technology (AS)

Admission Program of Study Code FSCI

State CIP Code 1743020112

The Fire Science Technology Associate in Science degree program offers students a sequence of courses designed to provide relevant technical knowledge needed to prepare students for entry or advancement in the fire service or in a related fire protection field. A technical certificate, Fire Officer Supervisor (6455) (T.C.), is included as an option within this degree program. Students may pursue the A.S. degree and earn the technical certificate while completing the requirements for the degree, or pursue the certificate to develop or upgrade their skills. Contact an advisor or counselor to determine the career education path that is best for you.

Career Opportunities
In addition to community fire departments, there are opportunities in government installations such as airports, as well as private fire-fighting companies. There is also a need for inspectors, investigators, forest rangers and smoke jumpers. In all cases, employment is based on high test scores and outstanding skills.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2720 - Company Officer

3 Credit Hours
(Fall, Spring, Summer)

Designed to assist fire officers in solving the varied problems and situations they will be required to manage effectively in today's ever changing fire service. The curriculum includes a review of fire department organization and administration, management theory, leadership, communication, motivation, and small group dynamics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2780 - Fire Department Administration

3 Credit Hours
(Fall, Spring, Summer)

The course is designed to present the principles of management theory, and its application in the fire service. The course is intended for officers whose area of responsibility encompasses long and short range planning, budgeting and administration.

Prerequisite(s): FFP 0010 and FFP 0020

Total Core Credits Required: 30

Technical Elective Courses

Select 15 credits from the following:

(Contains 15 hours articulation for Firefighter/Emergency Medical Technician-Combined (PSAV))

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.
And

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an

emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Firefighter I/II (PSAV)

Admission Program of Study Code FIRN
State CIP Code 0743020303

Entry into the Firefighting Certificate Program requires meeting the standards established by the Florida Division of State Fire Marshal, Bureau of Fire Standards and Training. A copy of these requirements is available through the Public Safety Division of NWF State College.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) degree (State CIP Code 1743030200).

Core Courses

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is

required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 398

Corequisite Course

FFP 0077 - First Responder for Public Safety Personnel

45 Clock Hours
(Fall, Spring, Summer)

This course trains public safety members who are the first to arrive at an emergency in providing efficient and accurate pre-hospital care. Students assess patients for wounds to determine if trauma, shock, burns or closed airways are a problem and how to address those issues by dressing wounds, stabilizing the person or administering oxygen. They immobilize patients and address common emergency medical issues with basic treatments. This course includes hands-on, practical experience and is necessary to be eligible for first responder certification.

This course is a co-requisite course for students entering the Firefighting Certificate program who do not have certification for first responder, EMT, or paramedic.
*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Fire Fighter (Basic) (PSAV) (FIRE)
Fall Semester FFP 0010 - Firefighting I **206 Clock Hours** FFP 0020 - Firefighting II **192 Clock Hours** FFP 0077 - First Responder for Public Safety Personnel **45 Clock Hours** * **Total Semester Clock Hours: 398**
Total Program Hours: 398

* FFP0077 is a program corequisite unless student is a First Responder, Paramedic or EMT

Firefighter/Emergency Medical Technician-Combined (PSAV)

Admission Program of Study Code FIEM
State CIP Code 0743020312

Basic Skills Requirements: The student must be exempt or attain a **10th grade level** on each section of the TABE exam: Math, Language and Reading.

Entry into the Firefighter/Emergency Medical Technician-Combined Program requires meeting the standards established by the Florida Division of State Fire Marshal, Bureau of Fire Standards and Training. A copy of these requirements is available through the Public Safety Division of NWF State College.

Firefighters are trained to extinguish and control fires in response to situations where property, life, or the environment is in danger. At the scene of an emergency, firefighters perform tasks assigned by their commanding officer. Depending on the situation, they may need to provide medical attention, break through debris, operate fire hoses, or enter a burning building. Firefighters are often first responders to car accidents, heart attack scenes, and other medical emergencies that do not involve fire.

Graduates of this program will be eligible to apply for the examinations to become both a Florida Certified Emergency Medical Technician/National Registry Emergency Medical Technician Basic and Florida Fire Standards. This will allow graduates to obtain employment as a firefighter EMT after 2 semesters of training.

The Firefighter/EMT Certificate program is two semester program that consists of Firefighter standards and EMT training. Applicants to this program must have a high school diploma or GED and meet other applicable admission criteria. If the number of qualified applicants to the program exceeds the number of openings, students will be accepted using a combination of application points . Contact the Emergency Services Office at (850) 729-4924 for additional information.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) degree (State CIP Code 1743030200).

Core Courses

EMS 0119 - Emergency Medical Technician for Firefighters

140 Clock Hours
(Fall, Spring, Summer)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director

Corequisite(s): FFP 0010, FFP 0020, EMS 0119L

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 0119L - Emergency Medical Technician Lab for Firefighters

160 Clock Hours
(Fall, Spring, Summer)

This course provides an integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director.

Corequisite(s): FFP 0010, FFP 0020, EMS 0119

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is

required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 698

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Firefighter/Emergency Medical Technician-Combined (PSAV)
Fall Semester
FFP 0010 - Firefighting I **206 Clock Hours**
FFP 0020 - Firefighting II **192 Clock Hours**
Total Semester Clock Hours: 398
Spring Semester
EMS 0119 - Emergency Medical Technician for Firefighters **140 Clock Hours**
EMS 0119L - Emergency Medical Technician Lab for Firefighters **160 Clock Hours**
Total Semester Clock Hours: 300
Total Program Clock Hours: 698

Food and Beverage Management (CCC)

Admission Program of Study Code FBMG
State CIP Code 0252090503

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The

course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beveragement Management (CCC) (FBMG)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FSS 2500 - Food and Beverage Cost Control **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** HFT 2210 - Hospitality Management **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** FSS 1120 - Food and Beverage Purchasing **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester HFT 2942 - Hospitality Internship **3 Credit Hours** FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 6**
Total Semester Hours: 30

Food and Beverage Operations (CCC)

Admission Program of Study Code FBOP
State CIP Code 0252090508

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101)

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beverage Operations (CCC) (FBOP)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** **Total Semester Hours: 6**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours**

Total Semester Hours: 3
Second Year
Spring Semester
FSS 2500 - Food and Beverage Cost Control **3 Credit Hours**
FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours**
Total Semester Hours: 6
Total Semester Hours: 18

Food and Beverage Specialist (CCC)

Admission Program of Study Code FBSP
State CIP Code 0252090507

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101)

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beverage Specialist (CCC) (FBSP)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Second Year
Spring Semester
FSS 2500 - Food and Beverage Cost Control **3 Credit Hours**

Total Semester Hours: 3
Total Semester Hours: 12

Graphic Design Production (CCC)

Admission Program of Study Code GRDP
State CIP Code 0611080303

Students who successfully complete this certificate may be eligible to receive credits towards the Graphics Technology (Graphic Design) A.S. Degree (State CIP Code 1611080300).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 25

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Graphic Design Production (CCC) (GRAT)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** **Total Semester Hours: 14**
Spring Semester ART 2603C - Digital Imaging II **4 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** GRA 1152C - Illustration II **3 Credit Hours** **Total Semester Hours: 11**
Total Program Hours: 25

Graphic Design Support (CCC)

Admission Program of Study Code GRDS
State CIP Code 0611080302

Students who successfully complete this certificate may be eligible to receive credits towards the Graphics Technology (Graphic Design) A.S. Degree (State CIP Code 1611080300).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 14

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Graphic Design Support (CCC) (GRDS)
Fall Semester ART 2602C - Digital Imaging I **4 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** **Total Semester Hours: 7**
Spring Semester

PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** **Total Semester Hours: 7**
Total Program Hours: 14

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Graphics Technology - Graphic Design Option (AS)

Admission Program Objective Code GRTH
State CIP Code 1611080300

The Graphics Technology (Graphic Design Technology) A.S. degree is intended for students interested in careers in Graphic Design and Commercial Art where creativity and visual communication are core competencies. Students are encouraged, but not required, to contact Graphic Arts faculty at 729-6019 for detailed advising to plan a program of study before enrolling in courses.

Students who successfully complete selected courses from this program of study may be eligible to receive the Graphic Design Production (CCC) (State CIP Code 0650040204), and/or Graphic Design Support (CCC) (State CIP Code 0650040202).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 24

Technical Elective Courses

Select 22 credits from the following:

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2905 - Independent Study – Graphic Design

1 Credit Hour
(Offered as needed)

The student will initiate independent computer related work, utilizing various software and hardware. The course may be taken four times for credit.

Prerequisite(s): GRA 1151C or PGY 1801C

▲Technology-Across-the-Curriculum Course.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 2221C - Commercial Photography II

4 Credit Hours
(Offered as needed)

As advanced a course that allows the student to expand their skill set in producing photographic illustrations for industrial and advertising use. Students may explore product, portrait, and on-location commercial photographic projects.

Prerequisite(s): PGY 1220C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2804C - Digital Photography III

4 Credit Hours
(Offered as needed)

An advanced-level photography courses where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 2802C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits (GRA, PGY) _

Total Technical Elective Credits Required: 22

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Graphics Technology, Graphics Design Option (AS) (GRTH)	Companion Certificate*	
First Year	GRDS	GRAT
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours** Additional General Education **2 Credit Hours** **Total Semester Hours: 15**	 √ √	 √ √
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours**	√ √	√ √

GRA 2190C - Graphic Design I **3 Credit Hours** Humanities General Education **3 Credit Hours** Science General Education **4 Credit Hours** **Total Semester Hours: 14**		
Summer Semester Social Science General Education **3 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** **Total Program Hours: 7**		√
Second Year		
Fall Semester GRA 1152C - Illustration II **3 Credit Hours** GRA 2191C - Graphic Design II **3 Credit Hours** ART 2603C - Digital Imaging II **4 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** GRA 2900 - Independent Study – Graphic Art **1 Credit Hour** **Total Semester Hours: 15**	√	√ √
Spring Semester PGY 2221C - Commercial Photography II **4 Credit Hours** GRA 2950C - Advanced Graphic Projects **4 Credit Hours** PGY 2804C - Digital Photography III **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** **Total Semester Hours: 13**		
Total Program Hours: 64		
* Courses with √ can also be used in the Companion Certificate indicated: Graphic Design Support (CCC) GRAT - Graphics Design Production (CCC)		

Graphics Technology - Visual Artist Option (AS)

Admission Program Objective Code GRTV
State CIP Code 1611080300

The Graphics Technology (Graphic Design Technology) A.S. degree is intended for students interested in careers in Graphic Design and Commercial Art where creativity and visual communication are core competencies. Students are encouraged but not required to contact Graphic Arts faculty for detailed advising before enrolling in courses to plan a program of study at 729-6019.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2500C - Painting I

3 Credit Hours
(Fall, Spring)

Course will include design elements, composition and spatial relationships. Emphasis is on color theory, color mixing, and execution thereof within a variety of subject matter. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 26

Technical Elective Courses

Select 20 credits from the following:

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2701C - Sculpture I

3 Credit Hours
(Spring)

An introductory course in the technical and aesthetic consideration of sculptural forms. Includes a wide range of materials and expressions, representing past and present sculptural methods. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2703C - Sculpture II

3 Credit Hours
(Spring)

Allows continued experience in more complex three-dimensional techniques; emphasis on individual projects and conceptual approach.

Prerequisite(s): ART 2701C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2501C - Painting II

3 Credit Hours
(Fall, Spring)

This course is a continuation of Painting I ART 2500C with emphasis on further exploration of student’s personal style and original techniques. Further experimentation in abstraction and emotional aspects of form and color are explored and expressed.

Prerequisite(s): ART 2500C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2955 - Portfolio Development

3 Credit Hours
(Spring)

Development of a working portfolio through studio project aimed at fulfilling the general requirements the average company, university, art school or advertising agency looks for in a portfolio presentation.

Prerequisite(s): ART 1201C, ART 1203C, ART 1300C, ART 1301C.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits _

Total Technical Elective Credits Required: 20

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Graphics Technology, Visual Artist Option (AS) (GRTV)
First Year
Fall Semester ART 1300C - Drawing I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours** Additional General Education **2 Credit Hours** **Total Semester Hours: 15**
Spring Semester GRA 1151C - Illustration I **3 Credit Hours** ART 1201C - Two-Dimensional Design **3 Credit Hours** Humanities General Educaiton **3 Credit Hours**

Science General Education **4 Credit Hours** **Total Semester Hours: 13**
Summer Semester ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism **3 Credit Hours ❖ † ¶** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 7**
Second Year
Fall Semester GRA 2190C - Graphic Design I **3 Credit Hours** GRA 1152C - Illustration II **3 Credit Hours** ARH 2402 - Art History: Modern Art **3 Credit Hours ❖ † ¶** ART 2500C - Painting I **3 Credit Hours** ART 1301C - Drawing II **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ART 2501C - Painting II **3 Credit Hours** ART 1203C - Three-Dimensional Design **3 Credit Hours** Social Science General Education **3 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** **Total Semester Hours: 14**
Total Program Hours: 64

Guest Services Specialist (CCC)

Admission Program of Study Code GUES
State CIP Code 0252090403

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Guest Services Specialist (CCC) (GUES)	Companion Certificate*
First Year	
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 3**	
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 3**	
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** **Total Semester Hours: 3**	√
Total Program Credits: 15	
* Courses with √ can also be used in the Companion Certificate indicated: Rooms Division Operations (CCC)	

Health Services Management (AS)

Admission Program Objective Code HTMG
State CIP Code 1351070101

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **2 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

HSA 1100 - Introduction to Health Care

3 Credit Hours
(Fall)

This course provides an overview of the United States Healthcare System, including the economic, social, political, and technological forces that shape the industry. The role of state and federal government and regulatory agencies in healthcare delivery is examined. The fundamental roles and responsibilities of healthcare team members are surveyed. Healthcare safety, security, and infection control procedures will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

or

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1346 - Supervision II

3 Credit Hours
(Offered as needed)

The course presents a continuing study of the functions of a personnel manager, philosophy of general management, employee socioeconomic climate and other information. Included are orientation, training, labor unions, safety, health and other related topics.

Prerequisite(s): MNA 1345 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Note(s):

***** *Anatomy & Physiology I with Anatomy & Physiology II may be substituted for BSC 2020C.*

*** Students who have successfully completed a health related program such as dental assisting, practical nursing, or surgical technology may challenge the Medical Terminology course. Contact the Division Director for further information.*

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Health Services Management (AS) (HTMG)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** HSA 1100 - Introduction to Health Care **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours** ♦ ▲ ¶ Mathematics General Education **- 3 Credit Hours** BSC 2020C - Human Structure and Function **4 Credit Hours** or BSC 1085C - Anatomy and Physiology I and BSC 1086C - Anatomy and Physiology II **Total Semester Hours: 16**
Spring Semester HSC 1100 - Health Education **3 Credit Hours** HSC 1400 - First Aid **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester HSC 1531 - Medical Terminology **3 Credit Hours**

MNA 1161 - Customer Service **3 Credit Hours** Social Science General Education **- 3 Credit Hours** Humanities General Education Course **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MNA 1345 - Supervision I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** or SPC 2300 - Interpersonal Communication ENC 2210 - Technical Report Writing **3 Credit Hours** Technical Elective **- 3 Credit Hours** Additional General Education Credits - **2 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 60

Homeland Security Emergency Manager (CCC)

Admission Program of Study Code HSEM
State CIP Code 0743030202

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration and Management A.S. degree (State CIP Code 1743030200).

Core Courses

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework

(NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies

necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) **3 Credit Hours**

Total Program Credits Required: 24

Hospitality and Tourism (AS)

Hospitality and Tourism

Admission Program of Study Code HSTR

State CIP Code 1252090101

The Hospitality and Tourism program prepares students for employment in management positions in the hospitality industry and/or provides supplemental training for persons previously or currently employed in these occupations. The hospitality industry as addressed in this program includes the hotel, motel, bed and breakfast, resort, club, marina, and other lodging organizations.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in :

Event Planning Management (CCC)

Food and Beverage Management (CCC)

Food and Beverage Operations (CCC)

Food and Beverage Specialist (CCC)

Guest Services Specialist (CCC)

Rooms Division Management (CCC)

Rooms Division Operations (CCC)

Rooms Division Specialist (CCC)

General Education

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**
- MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**
- BSC 1005 - General Biology **3 Credit Hours ♦** or CHM 1020 - Chemical Science **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦**
- ECO 2013 - Economics I **3 Credit Hours ♦**
- HUN 2201 - Nutrition **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup.

Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Hospitality and Tourism (AS) – Specializations – Event Planning, Food and Beverage, and Room Division
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** SLS 1101 - College Success **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** FSS 1250 - Dining Room Management **3 Credit Hours** BSC 1005 - General Biology, PHY 1020 - Physical Science, or CHM 1020 - Chemical Science **3 Credit Hours ♦** MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦** **Total Semester Hours: 12**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** HFT 1410 - Front Office Management **3 Credit Hours** CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 9**
Second Year
Fall Semester HFT 1300 - Managing Housekeeping **3 Credit Hours**

HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** HUN 2201 - Nutrition **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HFT 2210 - Hospitality Management **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** HFT 2942 - Hospitality Internship **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 60

Industrial Management Technology (AS)

Admission Program Objective Code INDU
State CIP Code 1652020501

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

Required Course

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

GEB 1214 - Business and Supervision Terminology

2 Credit Hours
(Fall)

This course is designed for students to achieve mastery of the special vocabulary, jargon, and concept terminology associated with general business and supervision in the modern workplace. Students will apply the terms in common workplace scenarios and hypothetical situations, as well as in standard written documents and assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 29

Technical Elective Courses

Select 13 credits from the following:

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to

management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2947 - Academic Learning Field Studies I

1 Credit Hour
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2948 - Academic Learning Field Studies II

2 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2949 - Academic Learning Field Studies III

3 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Total Technical Elective Credits Required: 13

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Industrial Management Technology (AS) (INDU)
First Year
Fall Semester GEB 1214 - Business and Supervision Terminology **2 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **1 Credit Hours** **Total Semester Hours: 15**
Spring Semester ETI 1710 - Occupational Safety **3 Credit Hours** MNA 1345 - Supervision I **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** Humanities General Education Course **3 Credit Hours** **Total Semester Hours: 15**

Second Year
Fall Semester Science General Education Course **3 Credit Hours** ACG 2001 - Accounting I **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** MAN 2300 - Personnel Management **3 Credit Hours** MNA 2100 - Organizational Behavior **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Infant/Toddler Specialization (CCC)

Admission Program of Study Code CITS
State CIP Code 0419070907

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

Total Core Credits Required: 12

Total Program Credits Required: 12

Law Enforcement Officer (Basic) (PSAV)

Admission Program of Study Code LEOB
State CIP Code 0743010700

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0001 - Introduction to Law Enforcement

12 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to law enforcement, the process for becoming a certified law enforcement officer, and the requirements of the academy program. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0012 - Legal

63 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to the criminal justice system, the chain-of-command system in law enforcement, Constitutional Law, Florida Statutes, and the Police Code of Ethics. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0013 - Interactions in a Diverse Community

42 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enhance student awareness and understanding of human diversity issues and to teach students skills to enable them to effectively interact with people of diverse backgrounds. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0014 - Interviewing and Report Writing

54 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to help the student learn vital communication skills including interviewing, note-taking, statement taking, and report writing. It also

helps the student to develop survival skills, stress management skills, and problem solving skills utilizing the SECURE model. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or

Corrections Basic Recruit Academy.

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CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0064 - Fundamentals of Patrol

36 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to understand Community Oriented Policing and how it is implemented as a problem solving model, and identify the SECURE problem solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, maintain mental and physical fitness; respond to a call, approach a suspect, make an arrest, transport a prisoner and process the prisoner at a detention facility; and understand how to direct traffic, how to enforce traffic citations, identify how to respond to alarms and conduct a building search, and search inventory and impound vehicles. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0065 - Calls for Service

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to respond to calls for service, disturbances, people in distress and court orders. This course is open only

to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0077 - Criminal Investigations

51 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond appropriately to a person or property crime victim, witness, and suspect; conduct a preliminary investigation on crimes against persons and crimes against property offenses; conduct a follow-up investigation to establish a suspect's identity and/or ascertain facts of the case; and, give testimony in different types of court proceedings. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0078 - Crime Scene to Courtroom

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond to a crime scene, protect and survey a crime scene, process a crime scene, dust for latent prints, and document a crime scene by sketching. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0084 - DUI Traffic Stops

33 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective DUI stops, including identifying a driver under the influence of alcohol and drugs, conducting field sobriety tests, and completing a DUI investigation. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0087 - Traffic Stops

30 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective traffic stops, including ethical consideration, safety considerations, citation and warning procedures, and dealing with abandoned vehicles. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0088 - Traffic Crash Investigations

33 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0092 - Critical Incidents

45 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to identify the crowd control procedures to safely and effectively disperse or control a large group of people; understand local emergency response plans; respond to a bomb threat, assesses the scene, search and evacuate a building or suspected bomb sight, identify Weapons of Mass Destruction and properly respond to a WMD incident. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0096A - Criminal Justice Physical Fitness I

31 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0096B - Criminal Justice Physical Fitness II

32 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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Total Program Hours Required: 801

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Law Enforcement Officer (Basic) (PSAV) LEOB)
Fall Semester CJK 0001 - Introduction to Law Enforcement **12 Clock Hours** CJK 0012 - Legal **63 Clock Hours** CJK 0013 - Interactions in a Diverse Community **42 Clock Hours** CJK 0014 - Interviewing and Report Writing **54 Clock Hours** CJK 0064 - Fundamentals of Patrol **36 Clock Hours** CJK 0065 - Calls for Service **36 Clock Hours** CJK 0077 - Criminal Investigations **51 Clock Hours** CJK 0078 - Crime Scene to Courtroom **36 Clock Hours** CJK 0020 - Law Enforcement CMS Vehicle Operations **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0096A - Criminal Justice Physical Fitness I **31 Clock Hours** CJK 0096B - Criminal Justice Physical Fitness II **32 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** **Total Semester Clock Hours: 549**
Spring Semester CJK 0092 - Critical Incidents **45 Clock Hours** CJK 0087 - Traffic Stops **30 Clock Hours** CJK 0084 - DUI Traffic Stops **33 Clock Hours** CJK 0088 - Traffic Crash Investigations **33 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0422 - Dart-Firing Stun Gun **9 Clock Hours**

CJK 0096C - Criminal Justice Physical Fitness III **21 Clock Hours** **Total Semester Clock Hours: 252**
Total Program Clock Hours: 801

LINUX System Administrator (CCC)

Admission Program of Study Code LINU
State CIP Code 0511100122

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology A.S. degree (State CIP Code 1511100112).

Technical Requirements

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses

designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2321 - UNIX Administration

3 Credit Hours
(Offered as needed)

This course is designed for network administrators in a UNIX operating environment. UNIX operating system concepts, architecture and administration will be explored using Linux. Includes shell programming, database managements, rapid application development, and programming tools such as PERL and C++.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CTS 1106

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Linux System Administrator (CCC) (LINU)
Fall Semester CET 1600C - Networking Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CTS 1156C - Desktop Support **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester CET 2615C - LAN Switching and Wireless **3 Credit Hours**

CET 2854C - Fundamentals of Wireless LANs **3 Credit Hours** CTS 1106 - Fundamentals of UNIX **3 Credit Hours** CTS 2321 - UNIX Administration **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 24

Management and Supervision - Health Care Management (BAS)

Admission Program of Study Code BSHC
State CIP Code 1105202991

See the BAS Management and Supervision Program Flowchart.

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Healthcare Management

HSA 3110 - Health Care Organization and Management

3 Credit Hours
(Spring)

This course focuses on the structure and management of health care organizations, and the fundamental issues facing the U.S. health care system. Key topics include health status, the organization of health services, manpower, public health, financing, facilities, utilization, quality, regulation, and national health policy.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3111 - Introduction to Health Care Management

3 Credit Hours
(Fall)

This course studies the administration, organization and delivery of health care in the United States. Topics to be examined include health care leadership, management, strategy, performance improvement, information technology, insurance, financial and human resources management, as well as ethical and legal concepts.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4191 - Health Information Systems

3 Credit Hours
(Fall)

This course focuses on the theories, concepts and principles of health information systems and development of critical thinking skills for use in practice/working in health care informatics. Current trends and issues in using, designing, and managing heath care information systems will be examined. Students, applying evidence-based knowledge, will analyze the design and implementation of health care information systems.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4922 - Capstone: Health Care Management

3 Credit Hours
(Spring)

This course integrates the information, skills, and abilities provided throughout the Health Administration Program in a capstone project. Students complete a project that demonstrates excellence by applying the knowledge gained from the core courses and materials studied throughout the program. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

Prerequisite(s): senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Total Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Health Care Management (BAS) (BSHC)
First Year
Fall Semester GEB 3213 - Business and Administrative Communication **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** HSA 3111 - Introduction to Health Care Management **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 3320 - Law and Business **3 Credit Hours** ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** HSA 3110 - Health Care Organization and Management **3 Credit Hours**

MAN 3240 - Organizational Behavior **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** FIN 4402 - Financial and Economic Management **3 Credit Hours** MAR 4333 - Marketing Strategy **3 Credit Hours** HSA 4191 - Health Information Systems **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HSA 4922 - Capstone: Health Care Management **3 Credit Hours** MAN 4720 - Strategic Planning and Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Management and Supervision - Human Resources Management (BAS)

Admission Program of Study Code BSHR
State CIP Code 1105202991

See the BAS Management and Supervision Program Flowchart.

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- ____ ____ - General Education Biological Sciences **3 Credit Hours***
- ____ ____ - General Education Physical Sciences **3 Credit Hours***
- ____ ____ - History/Government Social Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Human Resources Management

HUS 4950 - Capstone: Human Resources Management

3 Credit Hours
(Spring)

This capstone will build upon and integrate the primary human resource management skills introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge in the field of human resources.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3310 - Issues in Human Resource Management

3 Credit Hours
(Fall)

Introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. Approach will focus on current issues and applications.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3320 - Employee Staffing and Benefits

3 Credit Hours
(Fall)

An intermediate level course in employment staffing issues focusing on staffing patterns, organizational structures, job analysis and design, staffing efficiencies, employee assistance programs, staff projection models, and employee services.

Prerequisite(s): upper division standing and MAN 3310 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3350 - Training and Development

3 Credit Hours
(Fall)

Covers various staff training and development models, effective workshop techniques, designing and implementing company-wide training and development programs. Assessment of training needs, training and development as a benefit and setting development goals; students will design and conduct at least one workshop/training session for fellow students.

Prerequisite(s): upper division standing and GEB 3213 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Total Technical Elective Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Human Resources Management (BAS) (BSHR)

First Year

Fall Semester

GEB 3213 - Business and Administrative Communication **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

MAN 3310 - Issues in Human Resource Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

BUL 3320 - Law and Business **3 Credit Hours**

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3320 - Employee Staffing and Benefits **3 Credit Hours**

MAN 3240 - Organizational Behavior **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MAR 4333 - Marketing Strategy **3 Credit Hours**

MAN 3350 - Training and Development **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

HUS 4950 - Capstone: Human Resources Management **3 Credit Hours** MAN 4720 - Strategic Planning and Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Management and Supervision - Military Science and Leadership (BAS)

Admission Program of Study Code BSMS

State CIP code 1105202991

See the BAS Management and Supervision Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for courses listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Military Science and Leadership

MSL 3201 - Adaptive Team Leadership

3 Credit Hours
(Fall)

Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3202 - Leadership in Changing Environments

3 Credit Hours
(Spring)

Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, and apply principles and techniques of effective written and oral communication.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4301 - Developing Adaptive Leaders

3 Credit Hours
(Fall)

Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply leadership and problem solving principles to a complex case study/simulation.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4302 - Leadership in a Complex World

3 Credit Hours
(Spring)

Capstone course to explore topics relevant to second lieutenants entering the army, describe legal aspects of decision making and leadership, analyze army organization from tactical to strategic level.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

These hours should be designed as a progression towards a student's future workforce or educational goals.

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

Total Program Credits Required: 120

Suggest Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Military Science and Leadership (BAS)

First Year

Fall Semester

GEB 3213 - Business and Administrative Communication **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

MSL 3201 - Adaptive Team Leadership **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

BUL 3320 - Law and Business **3 Credit Hours**

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3240 - Organizational Behavior **3 Credit Hours**

MSL 3202 - Leadership in Changing Environments **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MSL 4301 - Developing Adaptive Leaders **3 Credit Hours**

MAR 4333 - Marketing Strategy **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

MAN 4720 - Strategic Planning and Management **3 Credit Hours**

MSL 4302 - Leadership in a Complex World **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Management and Supervision - Supervision (BAS)

Admission Program of Study Code BSSP
State CIP Code 1105202991

See the BAS Management and Supervision Program Flowchart.

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for courses listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Supervision

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3903 - Operations Research

3 Credit Hours
(Fall)

Operations Research is a science of modeling and optimization. It allows to model real-world problems by using mathematics, statistics and computers. It provides us the tools and theories to solve real-world problems by finding the optimal solutions to models subject to constraints of time, labor, resource, materials and business rules. With Operations Research, people make intelligent decisions to develop and manage their processes and businesses.

Prerequisite(s): Upper division standing is required. STA 2023, MAC 1140, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4940 - Capstone: Supervision

3 Credit Hours
(Spring)

This capstone course will build upon and integrate the primary management skills and concepts introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge. This course will also cover basic entrepreneurial principles, which will be integrated throughout the student-led projects.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining core and emphasis business courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Supervision (BAS) (BSSP)
First Year
Fall Semester

GEB 3213 - Business and Administrative Communication **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

MAN 3903 - Operations Research **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

BUL 3320 - Law and Business **3 Credit Hours**

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3240 - Organizational Behavior **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MAN 3593 - Logistics and Supply Chain Management-DNU **3 Credit Hours**

MAR 4333 - Marketing Strategy **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ISM 4011 - Information Systems Management **3 Credit Hours**

MAN 4720 - Strategic Planning and Management **3 Credit Hours**

MAN 4940 - Capstone: Supervision **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Medical Coder/Biller (CCC)

Admission Program of Study Code MEDB
State CIP Code 0351070714

Core Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

with

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

OR

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare

delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1432 - Pathopharmacology

3 Credit Hours
(Fall)

Introduction to the nature, cause, and treatment of disease entities and the body's defense mechanisms. Commonly used drugs will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2253 - CPT Coding - Part 1

3 Credit Hours
(Spring)

Instruction and practice in basic CPT coding conventions, principles of classifying physician services using current procedural terminology (CPT-4), APC, and auditing procedures. Ethical standards of practice will be analyzed.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

(Previously listed as HIM1253)

HIM 2272 - Healthcare Reimbursement

3 Credit Hours
(Summer)

Emphasis on billing regulations for the State of Florida. Course content includes LMRPS, Workers' Compensation laws, Florida Medicare, and claims for automobile accident injuries.

Prerequisite(s): HIM 2253 and HIM 2724 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2291 - CPT Coding Part 2

3 Credit Hours
(Spring)

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, inpatient and outpatient prospective payment systems, encoding software and RBRVs.

Prerequisite(s): HIM 2253 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2724 - ICD Coding Part 1

3 Credit Hours
(Fall)

This course provides a foundation using ICD-10-CM/PCS coding conventions, rules, methodology and sequencing, data sets, documentation requirements, and coding resources.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

HIM 2729 - ICD Coding Part 2

3 Credit Hours
(Fall)

This course focuses on assigning appropriate ICD, DRG, and Level II (HCPCS) codes to a wide range of original source medical documents. This course increases the quality of code selection by applying the decision process in problem solving using well-defined medical record review methods and guidelines. Ethical practices will be discussed.

Prerequisite(s): HIM 2724 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2815C - Professional Practice Experience

3 Credit Hours
(Summer)

Working in a simulated, online environment, students will endeavor to code and bill using nationally recognized, American Health Information Management Association (AHIMA) simulation software.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

Total Core Credits Required: 37

Total Program Credits Required: 37

Notes:

- Students must earn a grade of "C" or higher in each course in the curriculum in order to progress through the curriculum.
- Students must have a High School Diploma or GED to graduate from this program.

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Medical Coder/Biller (CCC) (MEDB)
Fall Semester BSC 2020C - Human Structure and Function **4 Credit Hours** HSC 1531 - Medical Terminology **3 Credit Hours** HIM 1432 - Pathopharmacology **3 Credit Hours** HIM 2724 - ICD Coding Part 1 **3 Credit Hours** (Session 2) HIM 2729 - ICD Coding Part 2 **3 Credit Hours** (Session 3) **Total Semester Hours: 16**
Spring Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** HIM 1000 - Health Information and Delivery Systems **3 Credit Hours** HIM 1012 - Health Care and Legal Compliance **3 Credit Hours** HIM 2253 - CPT Coding - Part 1 **3 Credit Hours** (Session 2) HIM 2291 - CPT Coding Part 2 **3 Credit Hours** (Session 3) **Total Semester Hours: 15**
Summer Semester HIM 2815C - Professional Practice Experience **3 Credit Hours** HIM 2272 - Healthcare Reimbursement **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 37

Microcomputer Repairer/Installer (CCC)

Admission Program of Study Code MCCR
State CIP Code 0647010406

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Engineering Technology (AS) degree (State CIP Code 161520100).

Core Courses

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Microcomputer Repair/Installer (CCC) (MCCR)
Fall Semester CET 2179C - PC Operating Systems A+ **3 Credit Hours** CTS 1156C - Desktop Support **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 9** **Spring Semester** CET 2660 - Network Security **3 Credit Hours**

CET 2182C - PC Hardware A+ **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 15

Middle Grades General Science (BS)

Admission Program Objective Code BSES
State CIP Code 1101313165

This program will no longer be admitting new students beginning with the 2018-1019 academic year.

The first sixty credits in the following program of study are designed to prepare students not only for the A.A. degree, but also for the General Knowledge exam and Middle Grades General Science Subject Area exam of the Florida Teacher Certification Exam (FTCE).

If you plan to be a middle grades science teacher and are just beginning your A.A. degree, this program of study will best prepare you for that career choice. If you have already completed your A.A. degree and some of your general education courses differ from those listed below, your A.A. degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the FTCE Middle Grades General Science Subject Area exam. A passing score on the FTCE Middle Grades General Science Subject Area exam is one of the graduation requirements for this degree. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Courses with the "C" designation include extra hours to accommodate laboratory and field experiences.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements. Requirements for Teacher Education programs may change due to legislative mandates. Candidates should request the most current requirements from the Teacher Education Program Director.

Lower Division (Associate Degree) Courses

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

Students must have a two-course science sequence (BSC 1010C and BSC 1011C, or CHM, or PHY) with lab for admission into the Middle Grades General Science Program. If a student has a PHY or CHM sequence, then he or she must take a biological science course to satisfy college General Education requirements.

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- ___ ___ - Core Mathematics **3 Credit Hours ♦**
- ___ ___ - General or Core Mathematics **3 Credit Hours ♦**

- BSC 1010C - Principles of Biology I **(recommended) 4 Credit Hours***
- GLY ___C - Geological Sciences **4 Credit Hours***
- ____ ____ - History/Government Social Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- BSC 1011C - Principles of Biology II **4 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group; GLYs are core physical science general education courses; BSC 1010C and BSC 1011C are core biological general education science courses. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

State-Mandated Prerequisites and Lower Division Coursework

Students must have a two-course science sequence (BSC 1010C and BSC 1011C, CHM, or PHY) with lab for admission into the Middle Grades General Science Program. If a student has a PHY or CHM sequence, then he or she must take a biological science course to satisfy college General Education requirements. Additionally, in order to master the state competencies in Middle Grades General Science and thus pass the Florida Teacher Certification Exam in the subject area, the College strongly recommends that students with PHY or CHM sequences also take BSC 1010C and 1011C.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

GLY ____C - Geological Science 4 Credit Hours (to be satisfied in General Education requirements)
OCE ____C - Oceanographic Science 4 Credit Hours
Two-course science sequence with lab [BSC 1010C and BSC 1011C (to be satisfied in general education requirements), CHM, or PHY] 8 Credit Hours. BSC 1010C and BSC 1011C strongly recommended. Please note: BSC 1085C and BSC 1086C do not meet the state mandated lab sequence requirement.

Additional Lower Division Coursework

- CHM 1020 or PHY 1020 **4 Credit Hours (prerequisite for upper division ISC 4145)**
- AST 1002 - Descriptive Astronomy **3 Credit Hours ♦**
- ___ ___ Course with diversity focus **3 Credit Hours** (see list below)
- ___ ___ Elective **2 Credit Hours**

Total Lower Division Additional Credits Including State Mandated Prerequisites Required: 24

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000, SYG 2010, WOH 1012, WOH 1022

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Courses

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of

the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

EVR 3949 - Extended Internship, Environmental Science

4 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum Grade of "B" in any college-level science course and permission of instructor.

ISC 4145 - Environmental Systems

3 Credit Hours
(Offered as needed)

Environmental Systems will expose students to a broad overview of the structure and processes occurring on Earth. Students will gain a broad understanding of the interactions between the atmosphere, biosphere, lithosphere, and hydrosphere. Course topics will be related to current environmental issues and our local ecosystems. This course is focused on Earth System Science content with development of methods specific to teaching middle school science as a secondary objective.

Prerequisite(s): (1) any two-course laboratory sequence in the natural sciences (i.e., Principles of Biology I & II, Principles of Geology I & II, College Chemistry I & II, Physics I & II, College Physics I & II, Anatomy & Physiology I & II); (2) any GLY course; (3) and either CHM1020 (Chemical Science) or PHY1020 (Physical Science).

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4930C - Seminar in Science Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in science, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching science in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4945 - Internship - Middle Grades Science

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Science in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430, EDG 3343, EDG 3410C, EME 3410C, EEX 3070, ESC 1000, EVR 3949, ISC 4145, MET 1010C, RED 3324C, RED 3335C, SCE 3350C, SCE 4940C, TSL 3081C, and CHM 1020 or PHY 1020

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

OR

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Middle Grade Science (BS) (BSES)
First Year
Fall Semester EDG 3343 - Instructional Strategies **3 Credit Hours** EDG 3410C - Classroom Management, School Safety, Law, and Ethics **3 Credit Hours** TSL 3081C - TESOL Issues and Practice **3 Credit Hours**

RED 3324C - Teaching in the Middle Grades Curriculum **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

EME 3410C - Integrating Technology in the Classroom **3 Credit Hours**

EDF 3430 - Measurement, Evaluation, and Assessment in Education **3 Credit Hours**

EVR 3949 - Extended Internship, Environmental Science **4 Credit Hours**

ESC 1000 - Earth Science **3 Credit Hours** ♦

Total Semester Hours: 14

Summer Semester

EDF 3214 - Human Development and Learning **3 Credit Hours**

CHM 1020 - Chemical Science **3 Credit Hours** ♦ or PHY 1020 - Physical Science **3 Credit Hours** ♦

EEX 3070 - Methods of Inclusion and Collaboration **3 Credit Hours**

MET 1010C - Introduction to Meteorology **4 Credit Hours**

Total Semester Hours: 14

Second Year

Fall Semester

SCE 3350C - Principles and Methods for Teaching Science K-8 **3 Credit Hours**

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience **1 Credit Hour**

ISC 4145 - Environmental Systems **3 Credit Hours**

RED 3335C - Teaching Reading in the Content Areas **3 Credit Hours**

Total Semester Hours: 10

Spring Semester

SCE 4945 - Internship - Middle Grades Science **9 Credit Hours**

SCE 4930C - Seminar in Science Education **1 Credit Hour**

Total Semester Hours: 10

Total Upper Division Program Hours: 60

Middle Grades Mathematics (BS)

Admission Program Objective Code BSEM
State CIP Code 1101313112

This program will no longer be admitting new students beginning with the 2018-1019 academic year.

The first sixty credits in the following program of study are designed to prepare students not only for the A.A. degree, but also for the General Knowledge exam and Middle Grades Math Subject Area exam of the Florida Teacher Certification Exam (FTCE).

If you plan to be a middle grades math teacher and are just beginning your A.A. degree, this program of study will best prepare you for that career choice. If you have already completed your A.A. degree and some of your general education courses differ from those listed below, your A.A. degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the FTCE Middle Grades Math Subject Area exam. A passing score on the FTCE Middle Grades Mathematics Subject Area exam is one of the graduation requirements for this degree. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Courses with the "C" designation include extra hours to accommodate laboratory and field experiences.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements. Requirements for Teacher Education programs may change due to legislative mandates. Candidates should request the most current requirements from the Teacher Education Program Director.

Lower Division (Associate Degree) Courses

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- MAC 1105 - College Algebra recommended or other Core Math **3 Credit Hours ♦**
- MAC 1140 - Pre-Calculus Algebra recommended or other General or Core Math **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

At least 6 hours of diversity credits should be included in General Education required credits.

Total General Education Credits Required: 36

State-Mandated Prerequisites

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- MAC ____ - Approved Mathematics Course(s) **4 Credit Hours** (To be satisfied in General Education Requirements by MAC 1105 - College Algebra and MAC 1140 - Pre-Calculus Algebra)

Additional Lower Division Coursework

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of

“C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites. Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

___ ____ - Course with diversity focus **3 Credit Hours** (See list below)

Choose 8 additional elective credits

___ ____ - Elective
___ ____ - Elective
___ ____ - Elective
___ ____ - Elective

Additional Lower Division Credits Required Including State Mandated Prerequisites: 24

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000, SYG 2010, WOH 1012, WOH 1022

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Courses

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

MAD 3107 - Applied Discrete Mathematics

3 Credit Hours
(Fall)

This course builds on the foundation established in Introduction to Discrete Mathematics with further exploration in logic, mathematical reasoning, and mathematical proof writing. Topics include logic, set theory, boolean algebra, combinatorics, and graph theory with applications.

Prerequisite(s): Completion of MAC 2312 with a grade of “C” or better or concurrent enrollment in MAC 2312.

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4312C - How Children Learn Math

3 Credit Hours
(Offered as needed)

This course is designed to develop the skills and concepts necessary to deliver the mathematics curriculum effectively in the classroom. The content strongly reflects the curriculum emphases of the National Council of Teacher of Mathematics, and topics are presented using a process-oriented approach. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4930C - Seminar in Math Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in mathematics, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4940C - Teaching Methods in Middle Grades Math Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4945 - Internship - Middle Grades Math

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Math in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430 , EDG 3410C, EDG 3343, EEX 3070, EME 3410C, MAC 2312, MAD 3107, MAE 3350C , MAE 4312C, MAE 4940C , MHF 4404, MTG 2206, RED 3324C, RED 3335C, STA 2023, and TSL 3081C

MAT 2905 - Applied Teaching Techniques for Mathematics

4 Credit Hours
(Summer)

The goals of this course are: refinement or acquisition of mathematics skills and connections between mathematics topics needed for successfully tutoring in an academic setting; acquisition of general methods of tutoring as well as specific tutoring techniques needed for specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. Prerequisite: Consent of the department. A minimum grade of "C" is required.

Prerequisite(s): Admission to the BS Middle Grades Math degree program

MHF 4404 - History of Mathematics

3 Credit Hours
(Offered as needed)

This course is for students pursuing an education degree with an emphasis in middle school and secondary mathematics. This course covers the evolution of mathematics from early number systems through modern mathematics. If used to meet NWFSC Teacher Education program requirements, this course requires a grade of "C" or better.

Prerequisite(s): Completion of MAC 2311 with a grade of "C" or better or concurrent enrollment in MAC 2311.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in

the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Middle Grades Mathematics (BS) (BSEM)
First Year
Fall Semester EDG 3343 - Instructional Strategies **3 Credit Hours** EDG 3410C - Classroom Management, School Safety, Law, and Ethics **3 Credit Hours** TSL 3081C - TESOL Issues and Practice **3 Credit Hours** RED 3324C - Teaching in the Middle Grades Curriculum **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester RED 3335C EME 3410C - Integrating Technology in the Classroom **3 Credit Hours** MTG 2206 - College Geometry **3 Credit Hours** EDF 3430 - Measurement, Evaluation, and Assessment in Education **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester EDF 3214 - Human Development and Learning **3 Credit Hours** STA 2023 - Statistics **3 Credit Hours ♦**

MAT 2905 - Applied Teaching Techniques for Mathematics **4 Credit Hours** EEX 3070 - Methods of Inclusion and Collaboration **3 Credit Hours** **Total Semester Hours: 13**
Second Year
Fall Semester MAE 3350C - Principles and Methods for Teaching Mathematics K-8 **3 Credit Hours** MAE 4940C - Teaching Methods in Middle Grades Math Field Experience **1 Credit Hour** MHF 4404 - History of Mathematics **3 Credit Hours** MAD 3107 - Applied Discrete Mathematics **3 Credit Hours** MAE 4312C - How Children Learn Math **3 Credit Hours** **Total Semester Hours: 13**
Spring Semester MAE 4945 - Internship - Middle Grades Math **9 Credit Hours** MAE 4930C - Seminar in Math Education **1 Credit Hour** **Total Semester Hours: 10**
Total Upper Division Program Hours: 60

Music Production Technology (AS)

Admission Program Objective Code MUSC
State CIP Code 1650091300

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Audio Technology (Recording Arts) (CCC) (State CIP Code 0650060209).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

MUM 1620 - Audio and Acoustic Fundamentals

3 Credit Hours
(Fall, Spring, Summer)

Audio and Acoustic Fundamentals explores the basics of audio systems and equipment and the acoustical environment in which they are used. Emphasis is placed on equipment terminology, function and acoustical listening. The two basic fundamentals are summed together to begin laying the basic foundation required to operate audio and recording equipment.

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

Total Core Credits Required: 15

Technical Elective Courses

Select 31 credits from the following:

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- ____ ____ Other Approved College Credits (MUL, MUM, MUN, MUS, MUT, MVB, MVK, MVP, MVS, MVV, MVW)
- ____ ____ Other Approved College Credits

Total Technical Elective Credits Required: 31

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Music Production Technology (AS) (MUSC)	Companion Certificate*
First Year	ATRA
Summer Semester MUT 1001 - Fundamentals of Music **3 Credit Hours** **Total Semester Hours: 3**	√
Fall Semester MUM 1620 - Audio and Acoustic Fundamentals **3 Credit Hours** MUT 1121 - Music Theory I - Ear Training and Sight Singing **3 Credit Hours** MVV 1211 - Applied Music – Voice I **1 Credit Hour** MUL 1010 - Music Appreciation **3 Credit Hours † ♦ ¶** MUN 1360 - Madrigal Singers I **1 Credit Hour** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 14**	√ √ √ √ √
Spring Semester MUM 2600 - Recording Techniques I **3 Credit Hours** MUT 1122 - Music Theory II - Ear Training and Sight Singing **3 Credit Hours** MVV 2221 - Applied Music – Voice II **1 Credit Hour** MUN 2361 - Madrigal Singers II **1 Credit Hour** MVS 1016 - Applied Strings – Guitar I **1 Credit Hour** General Education Mathematics Course **3 Credit Hours** General Education Social Science Course **3 Credit Hours** **Total Semester Hours: 15**	√ √ √ √ √
Second Year	
Summer Semester MUM 2300 - Introduction to the Music Industry **3 Credit Hours**	√

Total Semester Hours: 3	
Fall Semester MUM 2601 - Recording Techniques II **3 Credit Hours** MUT 2126 - Music Theory III – Ear Training and Sight Singing **3 Credit Hours** MVS 1016 - Applied Strings – Guitar I **1 Credit Hour** MUN 1710A - Rock and Jazz Ensembles I **1 Credit Hour** MUS 2930 - Music – Special Topics **3 Credit Hours** General Education Science Course **4 Credit Hours** **Total Semester Hours: 15**	√ √ √ √ √
Spring Semester MUM 2604 - Multi-Track Mixdown (Post Production) **3 Credit Hours** MUT 2127 - Music Theory IV – Ear Training and Sight Singing **3 Credit Hours** MVS 2026 - Applied Strings – Guitar II **1 Credit Hour** General Education Humanities Course **3 Credit Hours** Additional General Education Credits **2 Credit Hours** MUN 1720A - Rock and Jazz Ensembles II **1 Credit Hour** MUN 2361 - Madrigal Singers II **1 Credit Hour** **Total Semester Hours: 14**	√ √ √ √ √
Total Program Hours: 64	
* Courses with √ can also be used in the Companion Certificate indicated: ATRA - Audio Technology (Recording Arts) (CCC)	

Natural Gas Operations and Distribution (PSAV)

Admission Program of Study Code GAS

State CIP Code 0647000002

Basic Skills Requirements: The student must be exempt or attain a **9th grade level** on each section of the TABE exam: Math, Language and Reading.

Core Courses

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

TRA 0080 - Tractor Trailer Truck Driver

320 Clock Hours
(Spring)

This course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety, accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

TRA 0086 - Tractor Operator

150 Clock Hours
(Fall)

This course is designed to build on the skills and knowledge students learned in the Heavy Equipment Maintenance Technician course for entry into the Heavy Equipment Operations industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study pneumatic and crawler-type tractor operations.

TRA 0650 - Natural Gas Distribution I

75 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance.

TRA 0651 - Natural Gas Distribution II

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Prerequisite(s): TRA 0650

TRA 0652 - Natural Gas Distribution III

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Total Program Hours Required: 1220

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Natural Gas Operations (PSAV)
Fall Semester TRA 0650 - Natural Gas Distribution I **75 Clock Hours** TRA 0651 - Natural Gas Distribution II **150 Clock Hours** TRA 0652 - Natural Gas Distribution III **150 Clock Hours** TRA 0086 - Tractor Operator **150 Clock Hours** **Total Semester Clock Hours: 600**
Spring Semester

TRA 0080 - Tractor Trailer Truck Driver **320 Clock Hours** PMT 0106C - Welder Helper **150 Clock Hours** PMT 0111C - Metal Preparation **150 Clock Hours** **Total Semester Clock Hours: 620**
Total Program Clock Hours: 1220

Network Security (CCC)

Admission Program of Study Code NESC
State CIP Code 0511100118

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology (AS) degree (State CIP Code 1511100112).

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 24

Technical Elective Courses

Select 6 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software

required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- COP 2XXX Any 2000 level COP prefix course **3 Credit Hours**

Total Technical Elective Credits Required: 6

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Security (CCC) (NESC)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours**

CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 2892C - Advanced Network Security **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** CET 2685C - Fundamentals of Network Security **3 Credit Hours** **Total Semester Hours: 9**   **Summer Semester** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 30

Network Server Administration (CCC)

Admission Program of Study Code NNSA
State CIP Code 0511100112

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology A.S. degree (State CIP Code 1511100112).

Core Courses

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2302C - Windows Active Directory

3 Credit Hours
(Spring)

This course focuses on a Windows server directory service environment, including forest and domain structure, DNS, site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user/group/computer account strategies. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2390C - Installing and Configuring Windows Server 2016

3 Credit Hours
(Spring)

This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skill set and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking

services, and initial Hyper-V configuration and is also preparation material for, Exam 70-410: Installing and Configuring Windows Server 2016.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Technical Requirement Courses

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2391C - Administering Windows Server 2016

3 Credit Hours
(Spring)

This course is the second in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skills and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server 2016 infrastructure, such as user and group management, network access and data security and is also preparation material for, Exam 70-411: Administering Windows Server 2016.

Prerequisite(s): CTS 2390C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2392C - Configuring Advanced Windows Server 2016

3 Credit Hours
(Summer)

This course is the third in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 Infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2016 infrastructure, such as identity

management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance and rights management. This course is also preparation material, and maps directly to, Exam 70-412: Configuring Advanced Windows Server 2016 Services.

Prerequisite(s): CTS 2391C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Requirement Credits Required: 9

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Server Administration (CCC) (NNSA)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 2390C - Installing and Configuring Windows Server 2016 **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2163C - Windows 10 Client Operating System **3 Credit Hours** CTS 2302C - Windows Active Directory **3 Credit Hours** CTS 2391C - Administering Windows Server 2016 **3 Credit Hours** **Total Semester Hours: 12** **Summer Semester** CTS 2392C - Configuring Advanced Windows Server 2016 **3 Credit Hours** **Total Semester Hours: 3**
Total Program Hours: 24

Network Systems Technology (AS)

Admission Program Objective Code NSTC
State CIP Code 1511100112

Students may apply selected credits from this program to the requirements of the following college credit certificates: Digital Forensics (CCC) (State CIP Code 0511100119), Network Security (CCC) (State CIP Code 0511100118), Network Server Administration (CCC) (State CIP Code 0511100112), and/or LINUX System Administrator (CCC) (State CIP Code 0511100122).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 1675C - Introduction to IP Telephony

3 Credit Hours
(Fall)

This course explains how companies are using IP Telephony equipment and software to efficiently upgrade existing telephone systems. In addition, the course will give the student a fundamental understanding of the architecture of voice communication and how signaling, call quality and public switched telephone networks operate in a LAN/WAN networking environment. The use of IP Telephony products will be discussed and how software allows companies to cost-effectively upgrade and eventually replace existing (legacy) telephone systems with more cost-effective and easy-to-use telephone equipment.

Prerequisite(s): CET 1600C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2682C - Cisco Voice over IP (VoIP)

3 Credit Hours
(Spring)

Instruction includes, but is not limited to, Voice over Internet Protocol (VoIP) theory, Voice Gateway configuration in a IP Telephony (IPT) solution, IP Phone configuration, design of VoIP networks and troubleshooting IPT networks. Students will design and configure various VoIP networks using case studies and laboratory equipment.

Prerequisite(s): CET 1675C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments

as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Systems Technology (AS) (NSTC)
First Year
Fall Semester CET 2660 - Network Security **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** General Education Humanities **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 1610C - Routing Protocols and Concepts **3 Credit Hours** Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester CET 1675C - Introduction to IP Telephony **3 Credit Hours**

CET 1854C - Introduction to Wireless Technology **3 Credit Hours**

Social Science Education Course **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

CET 2682C - Cisco Voice over IP (VoIP) **3 Credit Hours**

Additional General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Program Hours: 60

* Courses with √ can also be used in the Companion Certificate indicated:
* DGFO - Digital Forensics (CCC) *
* NESC - Network Security (CCC)
* NNSA - Network Server Admin. (CCC) *
* NUNX - Linux System Administrator (CCC)

Nursing (AS)

Admission Program Objective Code NURS
State CIP Code 1351380100

This program is a Selective Admission program subject to additional program policies and licensure requirements stipulated in the "Nursing Program Student Handbook." Policies are strictly enforced and students should work with the Nursing Program staff rather than self-advise. The admission criteria and process are subject to change; students should contact the Associate Degree Nursing Program office for the most current information.

General Education

Unless otherwise noted, select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Any core Mathematics course **3 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or PSY 2012 - Psychology **3 Credit Hours ♦**

Total General Education Credits Required: 20

Core Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

NUR 1021C - Nursing Process I

6 Credit Hours
(Fall, Spring)

This course introduces concepts and principles of holistic nursing care. Students will build on knowledge obtained in the biophysical and psycho-social sciences in this first of four required clinical nursing courses in the nursing curriculum. Theory content includes an introduction to healthcare systems ethical-legal aspects of nursing practice, health and illness, communications, functional health patterns of clients, stress-adaptation, professional behaviors, and all steps of the nursing process with emphasis on assessment of older adult clients. Students begin socialization into the role of the Associate Degree Nurse as a member of an interdisciplinary healthcare team.

Prerequisite(s): Admission to the AS Nursing Program, BSC 1085C, ENC 1101, (MAC 1105 OR STA 2023)

Corequisite(s): NUR 1021L

Prereq/Corequisites: BSC 1086C, HUN 2201

Special Nursing Program policies may apply to this course.

NUR 1021L - Nursing Process I Clinical Experience

4 Credit Hours
(Fall, Spring)

This course introduces students to the role of the Associate Degree Nurse in providing direct, holistic nursing care to young, middle-aged and older adults who are hospitalized or in community settings. Students are introduced to all steps of the nursing process with a focus on assessment skills. Students will identify self-learning needs and set their own goals for improvement. Critical thinking and working effectively with peers and other healthcare professionals as a team member is expected. The demonstration of caring behaviors and therapeutic communication as a provider of bedside, technical nursing care is emphasized. Students must demonstrate safe performance of basic nursing skills, including but not limited to medication administration, physical assessment, and comfort care.

Prerequisite(s): Admission to the AS Nursing Program

Corequisite(s): NUR 1021C.

Special Nursing Program policies may apply to this course.

NUR 1141 - Pharmacologic Principles in Nursing I

1 Credit Hour
(Fall, Spring)

This course introduces students to concepts and principles of pharmacology related to safe administration of therapeutic agents within the nursing process framework. Students begin to learn major drug classifications and selected exemplars along with principles of safe, effective administration of drugs. Students will learn dosage calculations, factors that affect the absorption, excretion, distribution, and metabolism of drugs, as well as drug actions, adverse effects, and interactions.

Prerequisite(s): Admission to the AS Nursing Program

Special Nursing Program policies may apply to this course.

NUR 1142 - Pharmacologic Principles in Nursing II

1 Credit Hour
(Fall, Spring)

An introduction to the role of the associate degree nurse in providing direct, holistic nursing care to young, middle-aged and elderly adults who are hospitalized or receiving care in community settings. Emphasis is on applying all steps of the nursing process with focus on assessment skills. Pre-requisite college foundation and nursing courses provide theoretical bases for nursing care. Critical thinking is an expected behavior along with skills in working ethically and effectively with peers and other health care professionals as a team member; demonstrate caring behaviors and therapeutic communication with clients as a provider of bedside, technical nursing care. The student is expected to demonstrate safe performance of basic nursing skills, e.g., medication administration, physical assessment and comfort care of hospitalized adults and nursing home residents.

Prerequisite(s): NUR 1141 or LPN licensure and admission to the Nursing Program

Corequisite(s): NUR 1231C and NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 1231C - Nursing Process II

5 Credit Hours
(Fall, Spring)

Application of the nursing process continues with emphasis on the planning and implementation of nursing care for clients experiencing threats to functional health patterns. Development of professional behaviors, such as developing therapeutic relationships continues with students working clients through life interactions. Students further develop critical thinking skills through case studies and simulation scenarios designed to provide students with problem solving skills in analyzing, planning and prioritizing care for clients whose health problems are more acute or chronic; the client with psycho-emotional dysfunctions, dysfunctional support systems situations, grief, and loss. Students learn basic management skills as a team member caring for a limited number of clients in hospitals with emphasis on coordination of nursing care and discharge planning. Conflict management skills are highlighted as the student increases role as client advocate.

Prerequisite(s): NUR 1021L NUR 1021C and NUR 1141;or LPN licensure; admission to the AS Nursing Program or permission from the program director

Corequisite(s): NUR 1750L and NUR 1142

Prereq/Corequisites: DEP 2004

Special Nursing Program policies may apply to this course.

NUR 1750L - Nursing Process II - Clinical Experience

4 Credit Hours
(Fall, Spring)

This course builds on competencies presented in Nursing Process I regarding the role of the Associate Degree Nurse in providing direct, holistic nursing care for adult clients experiencing dysfunctional health patterns. Clinical experiences in hospitals, clinics, and community settings provide students with opportunities to apply the nursing process in care of clients, including the older adult. Students continue to develop management skills through conflict management and other professional behaviors. Students demonstrate safe performance of all basic and more complex nursing skills.

Prerequisite(s): NUR 1021L or LPN licensure

Corequisite(s): NUR 1231C.

Special Nursing Program policies may apply to this course.

NUR 2233C - Nursing Process III

6 Credit Hours
(Fall, Spring)

Students continue to use the nursing process and critical thinking with emphasis on primary and secondary prevention as nursing interventions in clients experiencing threats to functional health patterns, including during the childbearing process and children whose normal lines of defense have been invaded by stressors to the degree that hospitalization is necessary. Nursing practice issues continue to focus on ethical-legal issues related to acute and/or chronic illness and disability. Management skills include delegation and career development.

Prerequisite(s): NUR 1231C & NUR 1142 or approval from the program director.

Corequisite(s): NUR 2233L

Prereq/Corequisites: MCB 2010C

Special Nursing Program policies may apply to this course.

NUR 2233L - Nursing Process III – Clinical Experience

4 Credit Hours
(Fall, Spring)

Students continue to apply knowledge and skills learned in previous nursing courses in providing nursing care for the hospitalized child, the family during the maternity cycle, and adults whose health problems are more complex and/or chronic. Clinical sites include hospitals, health departments, clinics, physician offices, schools and other community settings. Conflict resolution skills are applied, as needed, to meet client and/or peer learning goals. Delegation skills with peers are also practiced. Students demonstrate continuation of all previously learned nursing skills and must perform safely all advanced nursing skills in this clinical course.

Prerequisite(s): NUR 1750L

Corequisite(s): NUR 2233C.

Special Nursing Program policies may apply to this course.

NUR 2241C - Nursing Process IV

5 Credit Hours
(Fall, Spring)

Students integrate knowledge and principles of the biophysical and psychosocial sciences to solve life-threatening problems that affect a limited number of critically ill clients in a variety of clinical settings. Students differentiate holistic nursing care therapies in primary, secondary and tertiary care settings. Students become proficient in applying all steps in the nursing process with emphasis on evaluating nursing care outcomes. Students apply critical thinking skills in exploring case-based practice situations and work together in simulation seminars to select effective client care improvement processes. Self-evaluation is part of the socialization process to prepare students for the work world as competent, caring staff nurses. Nursing practice issues include licensure standards and continued professional development.

Prerequisite(s): Permission from the Director of Nursing or NUR 2233C; MAC 1105 or STA 2023

Corequisite(s): NUR 2241L, NUR 2811L

Prereq/Corequisites: SYG 2000

Special Nursing program policies may apply to this course.

NUR 2241L - Nursing Process IV – Clinical Experience

3 Credit Hours
(Fall, Spring)

Students apply knowledge and principles of the biophysical and psychosocial sciences to assess, plan, implement and evaluate holistic nursing care of critically ill adults in hospitals, ambulatory care settings, and the home. Students will expand on management of care skills in preparation for their four-week clinical practicum prior to graduation from the program. Students will also shadow a home health/hospice nurse in observing treatment and palliative care of adults and children. Other clinical activities will include experiences in the emergency department and critical care units. Students must demonstrate competency in all behaviors required for an Associate Degree Nursing graduate.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2811L

Special Nursing Program policies may apply to this course.

NUR 2811L - Nursing Practicum

3 Credit Hours
(Fall, Spring)

This course is a capstone course and provides a time during the last four weeks of the nursing program in which students begin to transition from the student role into the graduate role as an associate degree nurse. Students attend seminar hours and complete standardized testing for evaluation in proficiency in applying all steps in the nursing process with emphasis on evaluating safe nursing care outcomes. Students complete clinical practice hours with an experienced registered nurse preceptor to provide holistic nursing care for a limited number of clients. The focus is on demonstration of all professional behaviors and competencies expected of the associate degree registered nurse graduate at entry level. Clinical experiences provide hands-on learning opportunities, enhancing clinical thinking, safe nursing judgment, and clinical confidence in skills. Clinical experiences take place in a variety of clinical settings and work schedules.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2241L

Special Nursing Program policies may apply to this course.

LPNs who successfully complete NUR 1142, NUR 1231C, NUR 1750L, NUR 2233C and NUR 2233L will receive credit for NUR 1021C, NUR 1021L, and NUR 1141.

Total Core Credits Required: 52

Technical Electives (Not Required)

NSP 2049L - Nursing Practice Readiness

1 Credit Hour
(Fall, Spring)

This elective laboratory course assists the nursing student to prepare for the RN licensure examination (NCLEX-RN). Web-based instructional methodologies allow the student to complete the course within a self-paced time frame. Students practice test taking skills, self-evaluation and other strategies to gain confidence in sitting for the NCLEX-RN.

Prerequisite(s): NUR 2241C or permission from Nursing Program Director.

Special Nursing Program policies may apply to this course.

NUR 1940L - Nursing Clinical Externship

3 Credit Hours
(Summer)

This elective course is designed to offer students the opportunity to gain additional clinical skills practice during the summer semester. Working with a preceptor and the nursing faculty in area hospitals, clinics, or community settings , the student will be able to perform all skills learned in successfully completed nursing courses.

Prerequisite(s): admission to the AS Nursing Program; NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 2931 - Special Topics in Associate Degree Nursing

1 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2932 - Special Topics in Associate Degree Nursing

2 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2933 - Special Topics in Associate Degree Nursing

3 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2934 - Special Topics in Associate Degree Nursing

4 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2935 - Special Topics in Associate Degree Nursing

5 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

Total Program Credits Required: 72

Suggested Two Year Academic Plan

This program admits students twice per year to being NUR courses in the fall and spring semesters. Below is a sample academic plan for these students admitted in the identified semester.

Nursing (AS) (NURS)
First Year
Summer or Fall Semester BSC 1085C - Anatomy and Physiology I **4 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics Core General Education course* 3 Credit Hours ♦ **Total Semester Hours: 10**

Fall or Spring Semester ("Semester 1 in Nursing Program")

BSC 1086C - Anatomy and Physiology II **4 Credit Hours**

HUN 2201 - Nutrition **3 Credit Hours**

NUR 1021C - Nursing Process I **6 Credit Hours**

NUR 1021L - Nursing Process I Clinical Experience **4 Credit Hours**

NUR 1141 - Pharmacologic Principles in Nursing I **1 Credit Hour**

Total Semester Hours: 18

Spring or Fall Semester ("Semester 2 in Nursing Program")

DEP 2004 - Human Growth and Development **3 Credit Hours**

Humanities Core General Education Course **** 3 Credit Hours ♦**

NUR 1231C - Nursing Process II **5 Credit Hours**

NUR 1750L - Nursing Process II - Clinical Experience **4 Credit Hours**

NUR 1142 - Pharmacologic Principles in Nursing II **1 Credit Hour**

Total Semester Hours: 16

Second Year

Fall or Spring Semester ("Semester 3 in Nursing Program")

MCB 2010C - Microbiology, Allied Health **4 Credit Hours**

NUR 2233C - Nursing Process III **6 Credit Hours**

NUR 2233L - Nursing Process III – Clinical Experience **4 Credit Hours**

Total Semester Hours: 14

Spring or Fall Semester ("Semester 4 in Nursing Program")

SYG 2000 - Sociology **3 Credit Hours ❖ ♦** or PSY 2012 - Psychology **3 Credit Hours ♦**

NUR 2241C - Nursing Process IV **5 Credit Hours**

NUR 2241L - Nursing Process IV – Clinical Experience **3 Credit Hours**

NUR 2811L - Nursing Practicum **3 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 72
***** While any Core General Education Mathematics course is acceptable, Statistics (STA 2023) should be strongly considered because it is a required course in the RN to BSN program. ****** AS Core General Education Humanities include the Speaking-Across-the-Curriculum (SATC) requirement. Students who already have a humanities course that does NOT include SATC, may take another humanities course that meets the SATC requirement or a speech course.

Nursing (BS)

Admission Program Objective Code BSNG
State CIP Code 1105138012

The baccalaureate Nursing program at Northwest Florida State College is accredited by the Commission on Collegiate Nursing Education, One DuPont Circle, NW, Suite 530, Washington DC 20036, (202)887-6791. For more information regarding disclosure, please review pages 15-16 of the CCNE Procedures for Accreditation of Baccalaureate and Graduate Degree Nursing Programs (http://www.aacn.nche.edu/ccne-accreditation/Procedures.pdf).

The program is an R.N. to B.S.N. degree career ladder and is open to applicants who currently hold a valid Registered Nursing license and have completed an ADN or diploma program. The program can be completed in three to four semesters. Program content for the B.S.N. program meets those specified in Florida's A.S. to B.S. Articulation Manual. All theory courses are taught on-line from the NWF State College Niceville campus and clinical activities can be completed near the student's residence.

Lower Division Courses

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

(To include GE courses that are required B.S.N. Common Prerequisites)

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ - General Education Math **3 Credit Hours**

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ____ ____ - General Education Humanities (SATC) **6 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- ____ ____ - General Education Physical Science **4 Credit Hours**

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ____ ____ - GE Social Science/History/Government **3 Credit Hours**

Total General Education Credits: 36

B.S.N. Common Prerequisite Courses

(Additional Common Prerequisites to those listed above under GE)

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

- ____ ____ CHM, BSC, BCH, PCB, PHY Course (CHM, PHY may be used for GE if 4 hours) **3 Credit Hours**

Total Common Prerequisite Courses: 13

Foreign Language

Credits must be earned in the same foreign language; the requirement may also be satisfied with two years of the same high school foreign language or appropriate score on an approved CLEP examination.

Total Foreign Language Credits: 8

Lower Division Nursing and Other Courses

Generally, these are the NUR courses required in the associate degree nursing program; credits may vary depending on how many additional non-NUR credits are needed to meet associate degree requirements.

Total Lower Division Nursing and Other Courses: 10-44

Total Lower Division Credits: 76

Lower division credits may differ from this number depending on whether or not the student must complete additional prerequisites or foreign language credits.

Upper Division Courses

Core Courses

NUR 3080 - Dimensions of Baccalaureate Nursing Practice

3 Credit Hours
(Fall, Summer)

This course will provide Registered Nurses, who are returning to school to earn a Baccalaureate degree, an

opportunity to advance professional practice concepts. As designed, the course engages the student intellectually in an ongoing professional dialogue and journey with peers, colleagues, and instructors that serves to broaden the student's professional development and builds on preexisting knowledge and experiences. The course curriculum is written for adult learners with the characteristics of self-direction, prior experience, applicability to practice, and motivation to meet the challenge to expand their knowledge base and to utilize advanced critical thinking skills.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3955 - Portfolio I

1 Credit Hour
(Fall, Summer)

This course will provide RN to BSN students an opportunity to develop an electronic professional portfolio to express one's professional nursing expertise and proficiency.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3067C - Health Assessment

3 Credit Hours
(Fall, Summer)

This course is designed to develop the student's knowledge for obtaining and recording a systematic, comprehensive health history, psychosocial assessment, and physical examination of the adult. The course involves the synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as they apply to the findings obtained in the comprehensive health assessment of clients of various ages. During the fieldwork experience, emphasis will be placed on collection of a database through physical assessment, history taking and interviewing.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3071 - Writing for Success in Nursing

1 Credit Hour
(Fall, Spring, Summer)

This course Is designed to develop the student's knowledge for writing at the upper division nursing level. The course includes information regarding use of APA format and scholarly writing resources.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research

3 Credit Hours
(Fall, Spring)

This course is designed to provide the RN to BSN student with an introduction to the research process and evidence based practice. The purpose of the course is to stimulate interest in nursing research; to enable students to understand and judge the usefulness of scientific findings; and to develop an understanding of how clinical proficiency is combined with experimental proof to produce nursing practices based upon evidence. An on-line teaching method is used with optional workshops available to students.

Prerequisite(s): STA 2023.

NUR 4615C - Family and Community Health

5 Credit Hours
(Fall, Spring)

The Family and Community Health Nursing course is designed to facilitate the conceptualizing of family, population groups, and community as units of care from diverse cultures, ethnic, and social backgrounds. The student is provided a fieldwork opportunity to assess the health needs of selected families and groups in the community setting with selected health promotion, risk reduction, and disease prevention. The nursing process is used to examine multiple influences impacting life-course experiences of families and communities to enhance functioning.

Prerequisite(s): NUR 3067C, NUR 3080, admission to the BSN program and completion of all General Education requirements.

NUR 4827C - Nursing Leadership and Management

5 Credit Hours
(Spring, Summer)

This course provides students with an evidence-based study of leadership, collaboration, and coordination in healthcare settings. Students develop an evidence based paper to deal with key leadership and management issues related to professional goals. Nursing leadership and management fieldwork focuses on the roles and functions of the professional nurse in these roles. Issues associated with healthcare delivery are explored. Fieldwork provides an opportunity to plan, implement and evaluate a change in the practice of nursing.

Prerequisite(s): NUR 3080,NUR 4165, NUR 3067C, NUR 4615C.

NUR 4956 - Portfolio II

1 Credit Hour
(Spring, Summer)

This course will provide students an opportunity to complete and evaluate their electronic professional portfolio to express their professional nursing expertise and proficiency.

Prerequisite(s): NUR 3955, NUR 3080; Pre or Corequisite: NUR 4827C.

- NUR ____ - Upper Division Nursing Elective (See Below) **3 Credit Hours**

NUR 3837 - Health Care Issues

2 Credit Hours
(Fall, Spring)

This course provides a forum for the exploration and evaluation of concerns germane to contemporary nursing. The focus of this course is on the nursing profession and current major issues and problems that concern it. Social forces influencing changes in the nursing profession are analyzed in terms of historical antecedents and their current manifestations. Recently passed, and pending legislature at both the national and state levels is emphasized.

Prerequisite(s): Current RN Licensure.

NUR 4125 - Clinical Pathophysiology

3 Credit Hours
(Fall, Spring)

This course examines in detail the underlying process involved in the development, evolution, manifestations, and complications of common clinical diseases across the life span, and compares normal and abnormal states. The biological bases for therapeutic clinical actions are examined.

Prerequisite(s): NUR 3067C

Total Upper Division Nursing Credits: 30

Upper Division Nursing Electives

NUR 3678 - Nursing Care of Vulnerable Populations

3 Credit Hours
(Offered as needed)

Caring for the vulnerable members of society is a function nurses perform without regard for their own ambitions, personal safety, and financial security. This course is designed to pull together material from different cultures and at risk groups of individuals considered vulnerable populations. Key concepts will be discussed that will provide a basic structure for caring for the vulnerable, the relevance of nursing theories to vulnerable populations, nursing research showing the kinds of phenomena nurses study, and many ideas about learning to work with and advocate for vulnerable individuals.

NUR 3826 - Nursing Ethics

3 Credit Hours
(Offered as needed)

This course provides an in-depth exploration of ethical principles and moral reasoning as the foundation of nursing practice. The ANA Code of Ethics will be used as a framework for examining current issues in healthcare delivery across the age span from reproductive issues to end-of-life care.

Prerequisite(s): Must be an RN or ASN student.

NSP 4275 - Introduction to Critical Care Nursing

3 Credit Hours
(Offered as Needed)

This course examines the needs of the critically ill client. As part of the human experience, the integrity of the individual and family may be disrupted by a critical illness. During such time, the critical care nurse assists the individual and family to restore life processes to a state of dynamic equilibrium. This course emphasizes the involvement through use of scientific rationale and application of the nursing process in providing care to the individual client and family. Critical care concepts and skills for promoting client and family well-being are stressed.

NSP 4869 - The Professional Nurse Manager and Leader

3 Credit Hours
(Offered as needed)

This course outlines the roles and functions of nurses in executive practice using the competencies identified by the American Organization of Nurse Executives (AONE). Successful nurse leaders and managers exercise complex leadership responsibilities that directly affect the quality of patient and family care in today's multifaceted healthcare management systems. This course will address competencies in communication, knowledge of the healthcare environment, business skills and principles, and professionalism. The course content also provides a review of the material covered in the Certified Nurse Manager and Leader examination conducted by the American Organization of Nurse Executives Credentialing Center that is available to BSN prepared Registered Nurses.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NSP 3640 - Nursing Care of Military and Veteran Populations

3 Credit Hours
(Spring)

This course is designed to identify the unique healthcare needs of military and veteran populations in the United States in order to prepare students and practicing nurses to develop competence in designing nursing interventions within civilian and government agencies in which military members and veterans seek healthcare. In accordance with the ANA's pledge (2012) to raise awareness of the unique conditions and needs of military veterans and their families, this course supports the Joining Forces initiative to further nursing training to include specialized topics such as traumatic brain injury, posttraumatic stress disorder, trauma rehabilitation, and understanding the military and veteran's healthcare delivery system.

SPN 3036 - Spanish for Health Care Providers

3 Credit Hours
(Offered as needed)

Spanish for Health Care Providers is designed for individuals majoring in nursing or working in health-related areas. The course focuses on vocabulary needed for the healthcare workplace, with grammar taught as a task-based practical skill. Students will learn phrases used to complete health assessments which include conducting interviews, filling out forms, writing reports, and reading and understanding medical articles and brochures. Prevalent disease processes will be discussed as well as cultural practices that affect health care, specifically the health care of Spanish-speaking patients. This course does not fulfill any part of the Florida state language requirements.

Portfolio

Credits are awarded after successful completion of the Portfolio I and II courses

Total Portfolio Credits: 14

Total Upper Division Credits: 44

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Nursing (BS) (BSNG)

First Year

Fall Semester

NUR 3955 - Portfolio I **1 Credit Hour**

NUR 3071 - Writing for Success in Nursing **1 Credit Hour**

NUR 3080 - Dimensions of Baccalaureate Nursing Practice **3 Credit Hours**

NUR 3067C - Health Assessment **3 Credit Hours**

ENC 1102 - English Composition II **3 Credit Hours ¶**

Total Semester Hours: 11

Spring Semester

NUR 4125 - Clinical Pathophysiology **3 Credit Hours**

NUR 3837 - Health Care Issues **2 Credit Hours**

General Education Humanities Course **3 Credit Hours**

General Education Social Science History/Government Course **3 Credit Hours**

Total Semester Hours: 11

Summer Semester

General Education Physical Science Course (CHM or PHY) **4 Credit Hours**

STA 2023 - Statistics **3 Credit Hours ♦**

Foreign Language I **4 Credit Hours**

Total Semester Hours: 11

Second Year

Fall Semester

NUR 4615C - Family and Community Health **5 Credit Hours**

NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research **3 Credit Hours**

Foreign Language II **4 Credit Hours**

Total Semester Hours: 12
Spring Semester NUR 4827C - Nursing Leadership and Management **5 Credit Hours** BSN Nursing Elective **3 Credit Hours** NUR 4956 - Portfolio II **1 Credit Hour** **Total Semester Hours: 9**
Portfolio credits are awarded after successful completion of NUR 4827C and NUR 4956 **14 Credit Hours** **Total Portfolio Credits: 14**
Total Upper Division Program Hours: 68

Office Administration (AS)

Admission Program Objective Code OFFA
State CIP Code 1552020401

Students who successfully complete selected technical courses in this program may also be eligible to receive the college credit certificates in Office Specialist (CCC) (State CIP Code 0552040704), Medical Office Management (CCC) (State CIP Code 0551071605), Office Management (CCC) (State CIP Code 05520200401).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet

are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general

principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Administration (AS) (OFFA)	Companion Certificate*		
First Year	OFSP	MEOM	OFMT
Fall Semester			
Mathematics General Education **3 Credit Hours**			
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**			
CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours**	√	√	√
OST 1107 - Word Processing I **3 Credit Hours**	√	√	√
Technical Elective **3 Credit Hours**			
Total Semester Hours: 15			

Spring Semester Science General Education Course **3 Credit Hours** Additional General Education Credits **3 Credit Hours** OST 2117 - Word Processing II **3 Credit Hours** OST 1355 - Records Management **3 Credit Hours** ENC 2210 - Technical Report Writing **3 Credit Hours** **Total Semester Hours: 15**	 √	 √	 √
Second Year			
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Social Science General Education **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Spring Semester OST 2401 - General Office Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	 √ 	 √ √ 	 √ √
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: OFSP - Office Specialist (CCC) MEOM - Medical Office Management (CCC) OFMT - Office Management (CCC)			

Office Management (CCC)

Admission Program of Study Code OFMG
State CIP Code 0552020401

Students who successfully complete this certificate may be eligible to receive credits towards the Office Administration (AS) degree (State CIP Code 1552020401).

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 15

Technical Elective Courses

Select 12 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the

instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 27

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Management (CCC) (OFMT)
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** OST 1107 - Word Processing I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester OST 2401 - General Office Management **3 Credit Hours** OST 2117 - Word Processing II **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 27

Office Specialist (CCC)

Admission Program of Study Code OFSP
State CIP Code 0552040704

Students who successfully complete this certificate may be eligible to receive credits towards the Office Administration (AS) degree (State CIP Code 1552020401).

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 6 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Specialist (CCC) (OFSP)
Fall Semester

CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** OST 1107 - Word Processing I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester OST 1355 - Records Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Paralegal Studies (AS)

Admission Program Objective Code PARA
State CIP Code 1722030200

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course

includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1003 - Introduction to Paralegal Studies

3 Credit Hours
(Fall)

This course is designed to give students a broad understanding of the nature of the paralegal profession and the elements contained within the profession, as well as its responsibility.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1114 - Legal Research and Writing

3 Credit Hours
(Spring)

This course is designed to provide the student with necessary skills and knowledge required in legal research/case analysis and legal writing.

Prerequisite(s): PLA 1003 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1600 - Wills, Trusts, and Probate

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of estate planning, wills, and probate administration.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2273 - Tort Law

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of tort law with objectives centered on personal injury torts.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2949 - Internship - Paralegal

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): completion of a minimum of 12 credit hours in the appropriate discipline, including PLA 1003 and permission of the instructor is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

*This college credit course is not intended for transfer and may not be applied toward the AA degree.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Paralegal Studies (AS) (PARA)
First Year
Fall Semester PLA 1003 - Introduction to Paralegal Studies **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **- 3 Credit Hours** Technical Elective **3 Credit Hours** PLA 1005 - Legal Terminology **3 Credit Hours** OR PLA 1013 - Introduction to the Legal System **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 2241 - Business Law I **3 Credit Hours** PLA 1114 - Legal Research and Writing **3 Credit Hours** Humanities General Education **- 3 Credit Hours** Social Science General Education **- 3 Credit Hours** PLA 1013 - Introduction to the Legal System **3 Credit Hours** OR PLA 1005 - Legal Terminology **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester PLA 2273 - Tort Law **3 Credit Hours** Science General Education **- 3 Credit Hours** PLA 1600 - Wills, Trusts, and Probate **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Spring Semester

PLA 1203 - Civil Procedure **3 Credit Hours** PLA 1800 - Introduction to Family Law **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Paramedic (CCC)

Admission Program Objective Code EMPM
State CIP Code 0351090405

Admission will be through a Limited Access application process. Graduates will be eligible to sit for the Paramedic certification exam. The curriculum forms the core of the Emergency Medical Services A.S. degree (State CIP Code 1351090402). Students may "add on" general education credits and some college credit electives to the Paramedic certificate and earn the A.S. degree. Students interested in pursuing this program should contact the Emergency Medical Services Office at (850) 729-4924.

Core Courses

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior,

and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the

student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on

mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 42

Preschool Specialization (CCC)

Admission Program of Study Code CCPS
State CIP Code 0419070908

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

Total Core Credits Required: 12

Total Program Credits Required: 12

Project Management - Acquisitions (BAS)

Admission Program of Study Code BSAQ
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required courses for the Emphasis in Acquisitions

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will

be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4931 - Acquisition Law Seminar

3 Credit Hours
(Spring)

This course addresses contract law as applicable to formation and administration of contracts with private and governmental agencies, with emphasis on the federal government. The following topics are also included: concepts of responsiveness and responsibility, bidding procedures, mistakes, negotiation procedures, changes, claims and dispute resolution. Students will explore the typical contracting problems that can lead to litigation.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3574 - Acquisition Management

3 Credit Hours
(Spring)

Students will be exposed to the fundamentals of government acquisitions. This course provides conceptual material on government acquisitions, to include program planning, execution, and control. Students will be introduced to the elements of program risk and learn risk management techniques. The systems engineering process will be emphasized to include work breakdown structures, cost -- benefit analysis, and scheduling.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4930 - Capstone: Acquisition Management

3 Credit Hours
(Spring)

In this seminar, students will have the opportunity to participate in hands-on projects applying the techniques in MAN 3574 - Acquisition Management. Emphasis will be on government acquisition management. Students will create a work-breakdown structure, a project schedule, and perform a cost-benefit analysis of alternatives. Earned value management will be introduced as a method of program control. Students will also identify potential risk areas and suggest mitigation plans.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Acquisitions (BAS) (BSAQ)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3574 - Acquisition Management **3 Credit Hours**

MAN 3583 - Project Management **3 Credit Hours**

BUL 4333 - Contract Formation and Administration **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

GEB 3444 - Business Trends and Issues **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

BUL 4931 - Acquisition Law Seminar **3 Credit Hours**

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MAN 4930 - Capstone: Acquisition Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Logistics (BAS)

Admission Program of Study Code BSLG
State CIP Code 1105202021

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Logistics

ENV 4610 - Sustainable Logistics

3 Credit Hours
(Spring)

This course introduces students to current and future trends in logistics technology, policy and sustainability. Topics include, source sustainability, environmental impacts of existing and emerging technologies, and local environmental conditions and the global climate.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3505 - Production Operations and Logistics Management

3 Credit Hours
(Spring)

This course examines the integration of production operations and logistics management and how this enables an organization to compete successfully in business. Special emphasis is placed on the relationships that exist between operations and the supply chain to include operations and supply chain strategies, business processes, project

management, product design and development, and inventory management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4570 - Purchasing and Materials Management

3 Credit Hours
(Fall)

The management of purchasing and the materials for production processes. Cost/price analysis, computer systems, forecasting, materials requirements, negotiations, and contracting are included.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

These hours should be designed as a progression towards a student's future workforce or educational goals.

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

Project Management – Logistics (BAS)
First Year

Fall Semester

GEB 3031 - Contemporary Business Practices **3 Credit Hours**

GEB 3213 - Business and Administrative Communication **3 Credit Hours**

BUL 3320 - Law and Business **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3583 - Project Management **3 Credit Hours**

MAN 3593 - Logistics and Supply Chain Management **3 Credit Hours**

MAN 3505 - Production Operations and Logistics Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

GEB 3444 - Business Trends and Issues **3 Credit Hours**

MAN 4570 - Purchasing and Materials Management **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ENV 4610 - Sustainable Logistics **3 Credit Hours**

FIN 4402 - Financial and Economic Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Project Management (BAS)

Admission Program of Study Code BSPR
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Project Management

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3120 - Leadership and Group Dynamics

3 Credit Hours
(Spring)

An applied leadership course with a focus on case studies, projects and group interaction; includes theoretical background on group dynamics, small group behavior and motivation, power, types of groups, verbal and non-verbal communication skills and team-building. Emphasis will be placed on sociological and psychological dimensions of inter-group relations, including analysis and problem-solving through simulations, cases and similar activities which reflect a general business perspective, as well as leadership and group dynamics across a variety of business units/functions.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and MAN 3052, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

- ____ ____ Approved Upper Division Elective **3 Credit Hours**

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Project Management (BAS) (BSPR)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** MAN 3120 - Leadership and Group Dynamics **3 Credit Hours** MAN 3583 - Project Management **3 Credit Hours**

BUL 4333 - Contract Formation and Administration **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester GEB 3444 - Business Trends and Issues **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** Approved Upper Division Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester FIN 4402 - Financial and Economic Management **3 Credit Hours** MAN 4931 - Capstone: Project Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Quality Improvement (BAS)

Admission Program of Study Code BSQU
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- ____ ____ - General Education Biological Sciences **3 Credit Hours***
- ____ ____ - General Education Physical Sciences **3 Credit Hours***
- ____ ____ - History/Government Social Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in

system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Quality Improvement

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4520 - Quality Management

3 Credit Hours
(Spring)

This course examines the significance of quality as a primary competitive strategy for tomorrow's successful business organizations. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations functions. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, field trips and outside speakers. The students are expected to gain insight

and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management. This course is appropriate for students who have an interest in: (1) managing the total quality program in a business organization, and/or (2) working for a business organization which already made a strong commitment to total quality management.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4555 - Quality Certification: ISO 9000

3 Credit Hours
(Fall)

A comprehensive study of internationally uniform quality standards (ISO 9000 and the steps to individual and organizational certification; includes management responsibility, quality system documentation, contract review, design control, process control, inspection and testing, corrective actions and other certification topics.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Quality Improvement (BAS) (BSQU)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** MAN 3583 - Project Management **3 Credit Hours** MAN 3593 - Logistics and Supply Chain Management-DNU **3 Credit Hours**

MAN 4520 - Quality Management **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester MAN 4555 - Quality Certification: ISO 9000 **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** GEB 3444 - Business Trends and Issues **3 Credit Hours** QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester FIN 4402 - Financial and Economic Management **3 Credit Hours** MAN 4931 - Capstone: Project Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Technology Management (BAS)

Admission Program of Study Code BSTM
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- ____ ____ - General Education Biological Sciences **3 Credit Hours***
- ____ ____ - General Education Physical Sciences **3 Credit Hours***
- ____ ____ - History/Government Social Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in

system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Technology Management

ISM 3220 - Network Technologies for Information Professionals

3 Credit Hours
(Fall)

This course is designed to give the student an understanding of the various networking technologies and their practical application in the management of a business. The course also covers the technical issues involved in designing and implementing an efficient network for voice, data, and information networks.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3232 - Software Essentials

3 Credit Hours
(Fall)

This course covers a broad range of software topics as they apply to software management and systems analysis and design. Topics include, but are not limited to programming, the systems development life cycle (SDLC), systems management, interface design and Internet technology.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3323 - Applications in Information Security

3 Credit Hours
(Spring)

This course helps develop the important security concepts relative to software application development and access control that provide the knowledge and skills necessary for the successful management of information security in an organization. Students will understand the environment where software is designed and developed as well as the critical role software plays in providing security to an organization's information systems. The course focuses on software development concepts that relate to security, and how access control methodologies fit into the entire enterprise architecture.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Total Electives Course Requirement: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Technology Management (BAS) (BSTM)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** ISM 3232 - Software Essentials **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours** MAN 3583 - Project Management **3 Credit Hours** ISM 3323 - Applications in Information Security **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester ISM 3220 - Network Technologies for Information Professionals **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

GEB 3444 - Business Trends and Issues **3 Credit Hours** QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester FIN 4402 - Financial and Economic Management **3 Credit Hours** ISM 4011 - Information Systems Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Radiography (AS)

Admission Program Objective Code RADT
State CIP Code 1351090700

The Radiography program is based on selective admission, subject to additional policies and licensure requirements. Students attend classes at the Niceville Campus, and are assigned to clinical rotations at various healthcare facilities in the district. Graduates are eligible to sit for the ARRT certification exam. For additional information contact the Health Technology Department at (850) 729-6444.

Please note: In order to be a part of the **Radiography program applicant pool**, students must declare Radiography as their intended major on the online admissions application.

General Education

Unless otherwise noted, select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Humanities **3 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

MAC 1105 - College Algebra , an equivalent, or higher level math course **3 Credit Hours**

Total General Education Credits Required: 20

Core Courses

RTE 1000 - Introduction to Radiologic Technology

2 Credit Hours
(Summer, Offered as needed)

This course is designed to provide an overview of the history of radiography and the role and scope of practice of the practitioner in the healthcare delivery system. Organizations, accreditation, federal agencies, regulatory agencies (including OSHA) and professional credentialing will be discussed. Content includes a fundamental background in medical law, ethics, human diversity and patient consent. The student will examine a variety of ethical issues and dilemmas found in clinical practice, as well as developing a better understanding of patients, the patient's families, and professional peers through comparison of diverse populations based on value systems, cultural and ethnic influences, communication styles and socioeconomic influences. Radiographic medical terminology and pharmacology will be covered. Site specific clinical education paperwork will be completed and students will perform required clinical observations in imaging departments. Background check, drug screening, training and clinical site approval mandatory.

Prerequisite(s): admission to the Radiography Program.

RTE 1111 - Introduction to Radiographic Patient Care

2 Credit Hours
(Fall)

This course is designed to prepare radiography students to provide basic patient care. Basic concepts of patient care will be described, as well as infection control procedures and standard precautions. This course includes hospital specific training. Health risks, life stages, HIV/AIDs and domestic violence will be discussed. This course also includes an introduction to medical and radiographic terminology. Topics include vital signs, venipuncture, body mechanics and transport, verbal/nonverbal communication, and some pharmacology.

Prerequisite(s): admission to the Radiography Program.

RTE 1418 - Radiographic Techniques I

3 Credit Hours
(Fall)

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. This course introduces the student to a comprehensive study and theory of the production of x-rays and primary exposure factors of radiographic imaging. The image parameters of density, contrast, recorded detail, image distortion and blur will be studied as well as ancillary devices and equipment required to produce a quality radiographic image. Digital imaging with related accessories will be emphasized. Class demonstrations and exercises are used to demonstrate application of theory.

Prerequisite(s): MAC 1105 or other Gordon Rule math course and admission to the Radiography Program.

RTE 1457C - Radiographic Techniques II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1418 Radiographic Techniques I. Course content includes the basics of magnetism, electricity, motors, generators, rectifying systems, x-ray tube and filament circuitry. Topics in electromagnetism such as self and mutual induction, high voltage transformation, and AC rectification will be emphasized. An introduction of special radiographic methods will include automatic exposure control, computers, fluoroscopy and image intensification, subtraction radiography, conventional tomography, digital image receptors, and digital image acquisition and manipulation.

Prerequisite(s): RTE 1418.

Corequisite(s): RTE 1513C

RTE 1503C - Radiographic Procedures I

4 Credit Hours
(Fall)

This course is designed to provide the Radiography student with instruction in radiographic examinations of the chest, abdomen, upper extremity and lower extremity. An introduction to medical and radiographic terminology, radiographic anatomy, and image critique are also included.

Prerequisite(s): BSC 1085C and admission to the Radiography program.

RTE 1513C - Radiographic Procedures II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1503C. It is designed to provide the student with instruction in radiographic procedures and anatomy in the distal extremities, hip region, spine, ribs, and sternum and the cranium. Critical thinking, medical and radiographic terminology, as well as image critique are emphasized.

Prerequisite(s): RTE 1503C, RTE 1804L , and BSC 1086C

Corequisite(s): RTE 1814L.

RTE 1804L - Radiography Clinical Education I

3 Credit Hours
(Fall)

This course involves the practical application of the theories covered in RTE 1503C and RTE 1000. Rotations provide experience with various imaging systems, protocols, and patient care. Students observe, assist and perform basic radiographic procedures (chest, abdomen and extremities) under direct supervision. This course emphasizes patient care and critical thinking. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1000

Corequisite(s): RTE 1503C

RTE 1814L - Radiography Clinical Education II

3 Credit Hours
(Spring)

This course is a continuation of Radiography Clinical Education I. This clinical training emphasizes lower and upper extremity. Medical and radiographic terminology, patient care, critical thinking and communication skills are emphasized. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1804L

Corequisite(s): RTE 1513C.

RTE 1824L - Radiography Clinical Education III

4 Credit Hours
(Summer)

This course is a continuation of Radiography Clinical Education II. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I and II. The student will gain experience and develop clinical competence in general radiographic procedures such as the cranium and specialized contrast studies. Advanced patient care skills, critical thinking, imaging and exposure techniques, radiation protection application and image processing will be emphasized. This rotation covers clinical experience in all phases of fundamental radiologic procedures and image critique. Students will rotate through ancillary departments in this course.

Prerequisite(s): RTE 1814L

Corequisite(s): RTE 2523C.

RTE 2061 - Radiographic Preparation for Practice

4 Credit Hours
(Spring)

This course is designed review information in preparation for the student to take the American Registry of Radiologic Technologist (ARRT) registry examination. The course will cover patient care and education, image production, equipment operation and maintenance, radiographic procedures and radiation protection. The student will also be given simulated registry examinations for practice and assessment purposes.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2854L.

RTE 2385 - Radiographic Protection and Biology

3 Credit Hours
(Fall)

This course is designed to provide the student with an overview of the principles of interaction of ionizing radiation with living systems. Ionizing effects on molecules, cells, tissues and the body as a whole are presented, along with factors affecting biological response, including; acute, chronic, stochastic and non-stochastic effects. This course is also designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and healthcare organizations are incorporated, as are the various methods of monitoring radiation exposure and acceptable dose limit values.

Prerequisite(s): RTE 1000, RTE 1418, RTE 1457C, RTE 2523C

Corequisite(s): RTE 2844L.

RTE 2473 - Radiographic Quality Assurance

2 Credit Hours
(Fall)

This course is designed to introduce the radiography student to evaluation methodology of radiographic systems to assure consistency in the production of quality images. Image critique, fluoroscopy, malfunctions, and specifications are some of the topics covered in the course.

Prerequisite(s): RTE 1418, RTE 1457C

Corequisite(s): RTE 2844L.

RTE 2523C - Radiographic Procedures III

3 Credit Hours
(Summer)

This course is a continuation of RTE 1513C covering cranium procedures and positioning. It is designed to provide the student with instruction in more complex radiographic procedures such as fluoroscopy, urinary studies, bone age, trauma, pediatrics, mobile and surgical radiography. Included is instruction in additional modalities and studies such as CT, MRI, arthography, myelography, and vascular studies. Attention will be given to the specialized equipment, contrast media, critical thinking and techniques necessary to perform these procedures. Radiographic anatomy, pathology, and critique of images are included in this course.

Prerequisite(s): RTE 1513C

Corequisite(s): RTE 1824L.

RTE 2533C - Radiographic Procedures IV

2 Credit Hours
(Fall)

This is a continuation of RTE 2523C, with emphasis on special procedures and additional modalities. Students are required to complete observations hours within specialty areas.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L

RTE 2571 - Introduction to Computed Tomography

1 Credit Hour
(Spring)

This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency.

Prerequisite(s): RTE 1457C

RTE 2782 - Radiographic Pathology

3 Credit Hours
(Spring)

This course is designed to introduce theories of disease causation and the pathophysiologic disorder that compromise healthy persons. Etiology, pathophysiologic responses, clinical manifestations, and radiographic appearance of alterations in body systems will be presented. Emphasis will be placed on pathological findings on diagnostic radiographic images.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2854L.

RTE 2844L - Radiography Clinical Education IV

5 Credit Hours
(Fall)

This course is a continuation of RTE 1824L. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I, II and III. The student will gain experience and develop clinical competence in specialized imaging procedures, and mobile, surgical and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 1824L

Corequisite(s): RTE 2385.

RTE 2854L - Radiography Clinical Education V

5 Credit Hours
(Spring)

This course is a continuation of RTE 2844L. The terminal objective for this course is to prepare the student for employment as an entry level technologist. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I-IV and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2061.

> **All RTE courses must be completed with a grade of 75 or higher to progress in the Radiography Program.**

Total Core Credits Required: 57

Total Program Credits Required: 77

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Radiography (AS) (RADT)
First Year
Summer Semester BSC 1085C - Anatomy and Physiology I **4 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** MAC 1105 - College Algebra **3 Credit Hours ♦** RTE 1000 - Introduction to Radiologic Technology **2 Credit Hours** **Total Semester Hours: 12**

Fall Semester

BSC 1086C - Anatomy and Physiology II **4 Credit Hours**

RTE 1111 - Introduction to Radiographic Patient Care **2 Credit Hours**

RTE 1503C - Radiographic Procedures I **4 Credit Hours**

RTE 1418 - Radiographic Techniques I **3 Credit Hours**

RTE 1804L - Radiography Clinical Education I **3 Credit Hours**

Total Semester Hours: 16

Spring Semester

RTE 1513C - Radiographic Procedures II **4 Credit Hours**

RTE 1457C - Radiographic Techniques II **4 Credit Hours**

RTE 1814L - Radiography Clinical Education II **3 Credit Hours**

DEP 2004 - Human Growth and Development **3 Credit Hours**

Total Semester Hours: 14

Summer Semester

Humanities General Education Course **3 Credit Hours**

RTE 1824L - Radiography Clinical Education III **4 Credit Hours**

RTE 2523C - Radiographic Procedures III **3 Credit Hours**

RTE 2571 - Introduction to Computed Tomography **1 Credit Hour**

Total Semester Hours: 11

Second Year

Fall Semester

RTE 2385 - Radiographic Protection and Biology **3 Credit Hours**

RTE 2473 - Radiographic Quality Assurance **2 Credit Hours**

RTE 2533C - Radiographic Procedures IV **2 Credit Hours**

RTE 2844L - Radiography Clinical Education IV **5 Credit Hours**

Total Semester Hours: 12

Spring Semester RTE 2061 - Radiographic Preparation for Practice **4 Credit Hours** RTE 2782 - Radiographic Pathology **3 Credit Hours** RTE 2854L - Radiography Clinical Education V **5 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 77

Rapid Prototyping Specialist (CCC)

Admission Program of Study Code RAPP
State CIP Code 0615000012

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) or the Engineering Technology - Digital Design & Modeling Specialization Option (AS) Option (Both State CIP Code 1615000001).

Core Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

Total Technical Elective Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Rapid Prototyping Specialist (CCC) (RAPP)
Fall Semester ETD 2364C - SolidWorks I **3 Credit Hours** ETD 2371C - 3D Printing I **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester ETD 2368C - SolidWorks II **3 Credit Hours** ETD 2372C - 3D Printing II **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 12

Rooms Division Management (CCC)

Admission Program of Study Code RMMG
State CIP Code 0252090402

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Rooms Division Management (CCC) (RMMG)	Companion Certificate*
First Year	
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 6**	
Second Year	
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours**	

HFT 2942 - Hospitality Internship **3 Credit Hours** FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 9**	√
Total Program Credits: 30	
* Courses with √ can also be used in the Companion Certificate indicated: Rooms Division Operations (CCC)	

Rooms Division Operations (CCC)

Admission Program of Study Code RMOP
State CIP Code 0252090406

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 19

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Rooms Division Operations (CCC) ()
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** HFT 1410 - Front Office Management **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester HFT 2940 - Hospitality Internship **1 Credit Hour** **Total Semester Hours: 1**
Second Year
Fall Semester
HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours**
HFT 2942 - Hospitality Internship **3 Credit Hours**
Total Semester Hours: 6
Total Semester Hours: 19

Rooms Division Specialist (CCC)

Admission Program of Study Code ROOM
State CIP Code 0252090405

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 13

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Rooms Division Specialist (CCC) (ROOM)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** HFT 2940 - Hospitality Internship **1 Credit Hour** **Total Semester Hours: 4**
Total Semester Hours: 13

Sports, Fitness and Recreation Management (AS)

Admission Program Objective Code SPFR
State CIP Code 1731050701

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

LEI 1544 - Outdoor Recreation Management

3 Credit Hours
(Fall, Spring)

This course examines the fundamental influences on outdoor recreation. The course also provides information on hazards, conservation considerations, and safety factors in planning and organizing outdoor recreations. Basic first

aid, CPR, and AED training is incorporated as it pertains to outdoor recreation. Field trips may be assigned as warranted.

PEM 1131A - Strength Training

3 Credit Hours
(Offered as needed)

This course is a high intensity lecture/demonstration and flexible lab hour weight training program designed to increase the size, strength, and endurance of the skeletal muscle system. Instruction includes, but is not limited to, weight training safety, etiquette, history, and nutrition. Instruction will be given in the design of progressive resistance programs to increase total body efficiency and to meet the objectives of the individual student. Students are responsible for determining fitness for training, and those with medical problems which restrict personal activities are encouraged to obtain medical clearance before enrolling in the course.

PET 1000 - Introduction to Physical Education

3 Credit Hours
(Offered as needed)

A study of the history of physical education and sport with particular emphasis placed on present practices and trends.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CLP 1001 - Personal Adjustment

3 Credit Hours
(Fall, Spring, Summer)

Psychology of adjustment, application of psychological theory for problem solving and better mental health. An examination of psychological defense mechanisms and adaptive behavior.

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring,

algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PEM 2108 - Fitness Lab

1 Credit Hour
(Offered as needed)

Instruction and participation in an exercise program with emphasis on muscle endurance, strength and flexibility.

Prerequisite(s): HLP 1081 or approved wellness assessment by the department chair.

This course may be taken up to four times for credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ - Selected Activity Courses (PEL, PEM, PEO) **4 Credit Hours**
- ____ ____ - Other Approved College Credits

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Sports, Fitness and Recreation Management (AS) (SPFR)
First Year
Fall Semester HSC 1400 - First Aid **3 Credit Hours** PET 1000 - Introduction to Physical Education **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** General Education Humanities Course **3 Credit Hours**

Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HUN 2201 - Nutrition **3 Credit Hours** General Education Mathematics Course **3 Credit Hours** General Education Social Science Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester HSC 1100 - Health Education **3 Credit Hours** PEM 1131A - Strength Training **3 Credit Hours** General Education Science Course **4 Credit Hours** Additional General Education Credits **2 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HLP 1081 - Wellness: Practice and Theory **3 Credit Hours** PET 2622 - Care and Prevention of Athletic Injuries **3 Credit Hours** LEI 1544 - Outdoor Recreation Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Stage Technology (Theater & Entertainment) (CCC)

Admission Program of Study Code STGT
State CIP Code 0650050201

Students who successfully complete this certificate may be eligible to receive credits towards one of the following Theatre and Entertainment A.S. degree options:

- Theater and Entertainment Technology - Acting Specialization Option (AS) (State CIP Code 1650050202)
- Theater and Entertainment Technology - Costuming Specialization Option (AS) (State CIP Code 0650050202)
- Theater and Entertainment Technology - Technical Theater Specialization Option (AS) (State CIP Code 0650050202)

Core Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

Total Core Credits Required: 17

Total Program Credits Required: 17

Theater and Entertainment Technology - Acting Specialization Option (AS)

Admission Program Objective Code THTA
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Stage Technology (Theater & Entertainment) (CCC) (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2120 - Improvisation

3 Credit Hours
Offered as needed

This course explores the use of creativity and imagination, engaging the actor in a wide variety of improvisational theatre games.

TPP 2141 - Acting in Shakespeare

3 Credit Hours
(Offered as needed)

This course is an introduction to the concepts, principles, and skills needed to develop characters in Shakespeare's plays. The course focuses on the hidden clues in the text to discover character choices and meaning. Specific analysis and the techniques of scansion are introduced as they relate to character interpretation. Application of these techniques will be presented in scenes and monologues.

TPP 2150 - Advanced Scene Study

3 Credit Hours
(Fall)

This course is a continuation of the processes and concepts of TPP 2111, Acting II, with the addition of new techniques to create dynamic and engaging characterizations through performance.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2533 - Stage Combat I (Unarmed & Rapier)

3 Credit Hours
(Spring)

Through in-class study and performance the student will develop an understanding of and proficiency in the safe techniques of unarmed and rapier stage combat which are required of a theatrical performer. Application of these techniques will be presented in two scenes, one for unarmed and one for rapier.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Acting Specialization Option (AS) (THTA)	Companion Certificate*
First Year	
Fall Semester	
Communications General Education Course **3 Credit Hours**	√
THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**	√
THE 2304 - Script Analysis **3 Credit Hours**	√
TPP 2110 - Acting I **3 Credit Hours**	
SPC 1608 - Public Speaking **3 Credit Hours †** or SPC 2300 - Interpersonal Communication **3 Credit Hours †**	
Total Semester Hours: 15	
Spring Semester	
TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**	√
TPP 2111 - Acting II **3 Credit Hours**	√
TPP 2220 - Auditioning **3 Credit Hours**	√
Humanities General Education Course **3 Credit Hours**	
Mathematics General Education Course **3 Credit Hours**	
Total Semester Hours: 15	
Second Year	
Fall Semester	
Natural Science General Education Course **3 Credit Hours**	√
TPP 2120 - Improvisation **3 Credit Hours**	
TPP 2150 - Advanced Scene Study **3 Credit Hours**	

TPA 1210 - Stagecraft **3 Credit Hours** TPP 1190 - Rehearsal and Performance I **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester TPP 2533 - Stage Combat I (Unarmed & Rapier) **3 Credit Hours** TPP 1191 - Rehearsal and Performance II **3 Credit Hours** TPP 2141 - Acting in Shakespeare **3 Credit Hours** TPP 1940 - Internship in Theatre Performance **3 Credit Hours** Social Science General Education Course **3 Credit Hours** **Total Semester Hours: 15**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC)	

Theater and Entertainment Technology - Costuming Specialization Option (AS)

Admission Program Objective Code THTC
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the Stage Technology (Theater & Entertainment) (CCC) certificate (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

HUM 1905A - Independent Study – Arts and Humanities

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue nonscheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): approval from department chair, a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2331 - Costume Construction

3 Credit Hours
(Offered as needed)

An introduction to costume construction techniques and wardrobe design. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in costume construction.

Prerequisite(s): TPA 2232

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1192 - Rehearsal and Performance III

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1191.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2930 - Theater Performance – Special Topics

3 Credit Hours
(Fall, Spring, Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Costuming Specialization Option (AS) (THTC)	Companion Certificate*
First Year	STGT
Summer Semester TPA 1290 - Technical Theatre Lab I **1 Credit Hour** HUM 1905A - Independent Study – Arts and Humanities **1 Credit Hour** **Total Semester Hours: 2**	 √ √

Fall Semester Communications General Education Course **3 Credit Hours** Speech General Education Course **3 Credit Hours** TPP 2110 - Acting I **3 Credit Hours** TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** **Total Semester Hours: 12**	
Spring Semester Social Science General Education Course **3 Credit Hours** TPA 2220 - Lighting Design **3 Credit Hours** TPP 1190 - Rehearsal and Performance I **3 Credit Hours** TPA 2331 - Costume Construction **3 Credit Hours** **Total Semester Hours: 12**	 √ √ √
Summer Semester Natural Science General Education Course **3 Credit Hours** TPP 1191 - Rehearsal and Performance II **3 Credit Hours** **Total Semester Hours: 3**	 √
Second Year	
Fall Semester Mathematics General Education Course **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** THE 2304 - Script Analysis **3 Credit Hours** **Total Semester Hours: 12**	 √
Spring Semester TPA 1291 - Technical Theatre Lab II **1 Credit Hour** TPP 1192 - Rehearsal and Performance III **3 Credit Hours**	

THE 2300 - Dramatic Literature **3 Credit Hours † ¶** TPA 2063 - Principles of Scenic Design **3 Credit Hours** TPP 2930 - Theater Performance – Special Topics **3 Credit Hours** TPA 1940 - Internship in Theatre Design or Production **3 Credit Hours** **Total Semester Hours: 16**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC) (STGT)	

Theater and Entertainment Technology - Dance Specialization Option (AS)

Admission Program Objective Code THTD
State CIP Code 1650050202

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

Select 33 credits from the following:

DAA 1104 - Modern I for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to affect an understanding of the art of the modern dance. It includes a brief history of the dance; instruction and practice in basic dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time. This course maybe taken 4 times for credit.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1204 - Ballet I for Majors

2 Credit Hours
(Fall, Spring, Summer)

A beginning dance course designed to serve as an introduction to the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1681 - Dance Ensemble

1 Credit Hour
(Fall, Spring)

The student shall participate in the preparation and performance of original dance compositions to include Dance

Line and Show Choir performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.
(to be completed three times for audit)

DAA 2105 - Modern II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to further the student's understanding of the art of the modern dance. It includes continued study in history of the dance; instruction and practice in intermediate level dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2205 - Ballet II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance course is designed to serve as an further training in the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2610 - Dance Composition

2 Credit Hours
(Fall, Spring)

An introduction and practice in the application of compositional tools encourages the student to explore and compose dance. By studying the body's movement in time and space the student will improve technical skills, develop improvisation and choreographic skills and enhance overall dance performance. Previous dance experience is helpful.

This course may be taken up to four times for credit.

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography)

1 Credit Hour
(Fall, Spring)

This course includes the continuation of study and participation in all rehearsals of selected works of dance repertory and/or original choreography culminating in public performance.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAN 1750 - Dance Conditioning

1 Credit Hour
(Fall, Spring)

Dance Conditioning is an excellent course in which to begin your dance training. It is designed to improve fundamentals for the beginning/intermediate student through daily practice in floor work, yoga, and Pilates exercises. This movement class will get you ready to meet the challenges of other dance classes by toning, strengthening and preparing the body to move.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAN 2120 - Dance Appreciation

3 Credit Hours
(Offered as needed)

This course is a study of the development of dance as an art form, as entertainment, and how it relates to the history of cultures and societies, emphasizing the evolution of dance in the specific genres such as ballet, modern dance, jazz dance, and world dance forms. Designed to heighten student awareness of dance as an integral part of society and establish an appreciation of dance's impact on the making of art. This course will give the student a foundation level understanding of dance as an art form and its historical and cultural significance. The major periods of dance history, master choreographers, and their works will be explored through lecture, discussion and media presentation. DAN 2120 is not an activity course.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Dance Specialization Option (AS) (THTD)
First Year
Summer Semester Communications General Education Course **3 Credit Hours** DAA 1200 - Fundamentals of Ballet **2 Credit Hours** **Total Semester Hours: 5**   **Fall Semester**

Mathematics General Education Course **3 Credit Hours**

DAA 1104 - Modern I for Majors **2 Credit Hours**

DAA 1204 - Ballet I for Majors **2 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1681 - Dance Ensemble - **Audit**

DAN 1750 - Dance Conditioning **1 Credit Hour**

DAN 2120 - Dance Appreciation **3 Credit Hours**

TPA 1210 - Stagecraft **3 Credit Hours**

Total Semester Hours: 16

Spring Semester

Natural Science General Education Course **3 Credit Hours**

DAA 1104 - Modern I for Majors **2 Credit Hours**

DAA 1204 - Ballet I for Majors **2 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1681 - Dance Ensemble - **Audit**

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography) **1 Credit Hour**

THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**

Total Semester Hours: 14

Second Year

Fall Semester

Humanities General Education Course **3 Credit Hours**

Speech Additional General Education Course **3 Credit Hours**

DAA 1681 - Dance Ensemble - **Audit**

DAA 2105 - Modern II for Majors **2 Credit Hours**

DAA 2205 - Ballet II for Majors **2 Credit Hours**

DAA 2610 - Dance Composition **2 Credit Hours** DAN 1750 - Dance Conditioning **1 Credit Hour** **Total Semester Hours: 13**
Spring Semester Social Science General Education Course **3 Credit Hours** DAA 2105 - Modern II for Majors **2 Credit Hours** DAA 2205 - Ballet II for Majors **2 Credit Hours** DAA 1520 - Tap I **1 Credit Hour** DAA 2683 - Performance Dance, (Repertory and/or Original Choreography) **1 Credit Hour** TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 60

Theater and Entertainment Technology - Music Theater Specialization Option (AS)

Admission Program Objective Code THTM
State CIP Code 1650050202

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1500 - Jazz I for Non-Majors

1 Credit Hour
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken four times for credit.
(to be completed twice for program credit)

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1680 - Dance Workshop

1 Credit Hour
(Fall, Spring)

This course includes instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

This course may be taken up to four times for credit.
(to be completed four times for **audit**)

- MUN ____ - Music Ensembles (to be completed four times for **audit**)

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MVV 1211 - Applied Music – Voice I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour session per week, with a minimum of one hour daily practice.

This course may be taken up to four times for credit.

MVV 1311 - Applied Music - Voice I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in voice in the freshman year of study as the student's principal performing medium. This one hour weekly lesson is for intended voice majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which four memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVV 2221 - Applied Music – Voice II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour lesson per week, with a minimum of one hour daily practice.

Prerequisite(s): MVV 1211.

This course may be taken up to four times for credit.

MVV 2322 - Applied Music - Voice II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in voice in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended voice majors, and requires Division Chair Approval. A major component of this class is a required juried performance at the end of the semester for which six memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211, MVV 1311 and Division Chair approval.

This course may be taken up to four times for credit.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2250 - Introduction to Musical Theatre

3 Credit Hours
(Fall)

Introduction to the study of Musical Theater analysis, creation, and performance with an emphasis on singing, dancing, and acting.

Total Technical Elective Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Music Theater Specialization Option (AS) (THTM)
Summer Semester Speech General Education Course **3 Credit Hours** DAA 1200 - Fundamentals of Ballet **2 Credit Hours** **Total Semester Hours: 5**
First Year
Fall Semester Communications General Education Course **3 Credit Hours** MUT 1111 - Music Theory I **3 Credit Hours** MUT 1241 - Ear Training and Sight Singing I **1 Credit Hour** DAA 1500 - Jazz I for Non-Majors **1 Credit Hour** DAA 1680 - Dance Workshop - **Audit** MUN XXXX - Ensemble - **Audit** MVV 1211 - Applied Music – Voice I **1 Credit Hour**

TPP 2110 - Acting I **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

Mathematics General Education Course **3 Credit Hours**

DAA 1500 - Jazz I for Non-Majors **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 2221 - Applied Music – Voice II **1 Credit Hour**

THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**

TPP 2111 - Acting II **3 Credit Hours**

TPP 2220 - Auditioning **3 Credit Hours**

Total Semester Hours: 14

Second Year

Fall Semester

Natural Science General Education Course **3 Credit Hours**

MUL 1010 - Music Appreciation **3 Credit Hours † ♦ ¶**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 1311 - Applied Music - Voice I for Majors **2 Credit Hours**

TPA 1210 - Stagecraft **3 Credit Hours**

TPP 2250 - Introduction to Musical Theatre **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Social Science General Education Course **3 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 2322 - Applied Music - Voice II for Majors **2 Credit Hours**

TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**

TPP 1940 - Internship in Theatre Performance **3 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 60

Theater and Entertainment Technology - Technical Theater Specialization Option (AS)

Admission Program Objective Code THTT
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the Stage Technology (Theater & Entertainment) (CCC) certificate (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 2276C - Entertainment Technology - Crafts

3 Credit Hours
(Spring)

This course presents the practices and principles of advanced woodworking, welding, smithing, casting, ceramics, plaster work, fiberglass and plastic technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented that will use items created in a realized production.

Prerequisite(s): TPA 1210.

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2292 - Technical Theatre Lab III

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1291

TPA 2301 - Technical Theatre Lab IV

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 2292

TPA 2343 - CAD for the Theatre

3 Credit Hours
(Offered as Needed)

This course is project oriented covering fundamental through advanced material in computer aided drafting and design and its application for the theatre.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

Total Technical Elective Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Technical Theater Specialization Option (AS) (THTT)	Companion Certificate*
First Year	STGT
Summer Semester Social Science General Education Course **3 Credit Hours** TPA 1290 - Technical Theatre Lab I **1 Credit Hour** **Total Semester Hours: 4**	
Fall Semester Communications General Education Course **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** TPA 2212 - Sound Production for the Stage **3 Credit Hours** TPA 2343 - CAD for the Theatre **3 Credit Hours** THE 2304 - Script Analysis **3 Credit Hours** **Total Semester Hours: 15**	 √ √
Spring Semester	

TPA 1291 - Technical Theatre Lab II **1 Credit Hour**	√
TPA 2063 - Principles of Scenic Design **3 Credit Hours**	√
TPA 2220 - Lighting Design **3 Credit Hours**	√
TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**	
TPA 2276C - Entertainment Technology - Crafts **3 Credit Hours**	
Total Semester Hours: 13	
Second Year	
Fall Semester	
Natural Science General Education Course **3 Credit Hours**	√
Humanities General Education Course **3 Credit Hours**	
Speech Additional General Education Course **3 Credit Hours**	
TPA 2292 - Technical Theatre Lab III **2 Credit Hours**	
TPP 2110 - Acting I **3 Credit Hours**	
Total Semester Hours: 14	
Spring Semester	
General Education Mathematics Course **3 Credit Hours**	√
THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**	
TPA 1940 - Internship in Theatre Design or Production **3 Credit Hours**	
TPA 2301 - Technical Theatre Lab IV **2 Credit Hours**	
TPA 2600 - Stage Management **3 Credit Hours**	
Total Semester Hours: 14	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC)	

Unmanned Vehicle Systems Operations - Business Development Specialization (AS)

Admission Program of Study Code DRO2

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 2401 - GIS Applications in Social Science

3 Credit Hours
(Offered as Needed)

This course surveys the use of GIS for solving spatial problems in the social sciences. Examples from the fields of health, economic geography and real estate, housing, transportation, criminology, among others are used to illustrate how spatial techniques are used to address problems in a GIS environment. Special consideration will be given to the data needs of such operations, the implementation of methods in a GIS environment, and understanding the spatial assumptions and issues that underpin analyses.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours**

PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Fire/Rescue Specialization (AS)

Admission Program of Study Code DRO1

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground

commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours**

ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Law Enforcement Specialization (AS)

Admission Program of Study Code DRON

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned

vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)

First Year

Fall Semester

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

ATT 1100 - Private Pilot Ground School **3 Credit Hours**

PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**

ETI 1710 - Occupational Safety **3 Credit Hours**

SLS 2505 - Critical Thinking **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

MAC 1105 - College Algebra **3 Credit Hours ♦**

ENC 2210 - Technical Report Writing **3 Credit Hours**

ETM 1005C - Basic Mechanical Operations **3 Credit Hours**

ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 17

Second Year

Fall Semester

POS 1041 - American Government **3 Credit Hours ♦ ¶**

PHY 1020 - Physical Science **3 Credit Hours ♦**

Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

PGY 1801C - Digital Photography I **4 Credit Hours**

Total Semester Hours: 16

Spring Semester

ASC 2564C - Unmanned Vehicle Security **4 Credit Hours**

ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Payload Specialist Specialization (AS)

Admission Program of Study Code DRO3

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties,

functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of

"C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC

machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦**

Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Welding Technology (PSAV)

Admission Program of Study Code WELT
State CIP Code 0648050805

This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

Basic Skills Requirements: The student must be exempt or attain a **9th grade level** on each section of the TABE exam: Math, Language and Reading.

The night welding program is not accepting new students during the 2018-19 academic year.

Core Courses

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides instruction and demonstration using Shielded Metal Arc Welding (SMAW). Topics include visually inspect of welds, and basic SMAW technical terminology. Basic structural welding techniques will be demonstrated in accordance with American Welding Society (AWS) D1.1 Structural Welding Code. Tack welding and metal joint fit of carbon steel is covered in this course.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course introduces structural fillet welds in different joint positions in accordance with AWS D1.1 Structural Welding Code. Fillet welds will be performed on carbon steel plate of various thicknesses.

Prerequisite(s): PMT 0121C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides the student with instruction on joint design, joint preparation, and fit-up, and performance of groove welds with backing. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds with backing and make acceptable groove welds with backing using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0122C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Spring, Summer)

This course provides the student with advanced instruction on joint design, joint preparation, and fit-up, and performance of open groove welds. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of open groove welds and make acceptable open groove welds in all positions using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0126C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0134C - Gas Metal Arc Welding (GMAW)

50 Clock Hours
(Spring, Summer)

This course provides instruction and demonstration using the various transfer methods and techniques of Gas Metal Arc Welding (GMAW). Topics included are safety, equipment set-up, joint design and preparation, and gases.

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PMT 0145C - Flux-Core Arc Welding (FCAW)

240 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to flux cored

arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Flux-Core Arc Welding (FCAW) and basic understanding of pipe welding. Welding symbols and blueprint reading are covered in this course.

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PMT 0155C - Gas Tungsten Arc Welding (GTAW)

160 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to gas tungsten arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Gas Tungsten Arc Welding (GTAW), and basic understanding of pipe welding.

Total Program Hours Required: 1050

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Welding Technology (PSAV) (WELT) - Day Schedule
Fall Semester PMT 0106C - Welder Helper **150 Clock Hours** PMT 0111C - Metal Preparation **150 Clock Hours** PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW) **75 Clock Hours** PMT 0122C - Basic Shielded Metal Arc Welding (SMAW) **75 Clock Hours** PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW) **75 Clock Hours** **Total Semester Clock Hours: 525**
Spring Semester PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW) **75 Clock Hours** PMT 0134C - Gas Metal Arc Welding (GMAW) **50 Clock Hours** PMT 0145C - Flux-Core Arc Welding (FCAW) **240 Clock Hours**

PMT 0155C - Gas Tungsten Arc Welding (GTAW) **160 Clock Hours** **Total Semester Clock Hours: 525**
Total Program Clock Hours: 1050

Welding Technology (PSAV) (WELT) - Night Schedule
Spring Semester PMT 0106C - Welder Helper **150 Clock Hours** PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW) **75 Clock Hours** PMT 0122C - Basic Shielded Metal Arc Welding (SMAW) **75 Clock Hours** PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW) **75 Clock Hours** **Total Semester Clock Hours: 375**
Summer Semester PMT 0111C - Metal Preparation **150 Clock Hours** PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW) **75 Clock Hours** PMT 0134C - Gas Metal Arc Welding (GMAW) **50 Clock Hours** **Total Semester Clock Hours: 275**
Fall Semester PMT 0145C - Flux-Core Arc Welding (FCAW) **240 Clock Hours** **Total Semester Clock Hours: 400**
Total Program Clock Hours: 1050

Welding Technology - Advanced (PSAV)

Admission Program of Study Code WELA
State CIP Code 0648050806

This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

Core Courses

PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding

200 Clock Hours
(Offered as needed)

This course introduces the student to the practices and procedures of welding carbon steel pipe using the Shielded Metal Arc Weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation and fit-up. Upon completion, students should be able to demonstrate pipe positions, proper electrodes selection, proper joint geometry, joint preparation, fit-up, and proper SMAW pipe welding techniques in accordance with applicable codes.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0171C - SMAW-GTAW Pipe Welding

400 Clock Hours
(Offered as needed)

This course is designed to provide the students with skills in welding carbon steel pipe using Shielded Metal Arc Weld process and Gas Tungsten Arc Weld (GTAW) processes using proper filler metals in the 2G, 5G, and 6G positions. Upon completion, students should be able to perform shielded metal arc welding process and gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in the 2G, 5G, and 6G position in accordance with the applicable code.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0173C - Specialty Pipe Welding

150 Clock Hours
(Offered as needed)

This courses covers advanced pipe welding and is designed to build advanced GTAW skills. This course covers advanced Gas Tungsten Arc Welding (GTAW) on alloy pipe and heavy wall carbon pipe.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 750

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Welding Technology - Advanced (PSAV) (WELA) - Day Schedule
Summer Semester PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding **200 Clock Hours** **Total Semester Clock Hours: 200**
Fall Semester PMT 0171C - SMAW-GTAW Pipe Welding **400 Clock Hours** PMT 0173C - Specialty Pipe Welding **150 Clock Hours** **Total Semester Clock Hours: 550**
Total Program Clock Hours: 750

Welding Technology - Advanced (PSAV) (WELA) - Night Schedule
Spring Semester PMT 0171C - SMAW-GTAW Pipe Welding **400 Clock Hours** **Total Semester Clock Hours: 400**
Summer Semester PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding **200 Clock Hours** PMT 0173C - Specialty Pipe Welding **150 Clock Hours** **Total Semester Clock Hours: 350**
Total Program Clock Hours: 750

General Education

AA Degree General Education Requirements

AAS Degree General Education Requirements

AS Degree General Education Requirements

- Diversity Focus for Teacher Education Programs
- Gordon Rule Courses
- Oral Communication Speaking-Across-the-Curriculum
- Technology-Across-the-Curriculum
- Writing-Across-the-Curriculum
- Civic Literacy Competency

General Education

General Education for All Degrees

All NWF State College degree programs contain both specialized courses and general education courses. Bachelor of Applied Science, Bachelor of Science and Associate in Arts students complete at least thirty-six (36) general education credits from five subject area categories. Associate in Science students complete at least eighteen (18) general education credits from five (5) subject areas. The general education component of each program is designed to further the mission and goals of the college. Upon successful completion of general education coursework, the student will:

1. Demonstrate proficiency in reading, writing and speaking;
2. Apply reflection, analysis, synthesis, logical reasoning and evaluation to formulate judgments, reach decisions and solve problems;
3. Understand and apply mathematical and scientific principles and methods;
4. Find, evaluate, organize and use information accurately and effectively;
5. Participate actively as informed and responsible citizens in social, cultural, global and environmental matters.

The NWF State College General Education Program is designed to conform to all applicable regional accreditation criteria, Florida State Board of Education Rules, and the Florida Statewide Articulation Agreement. To that end, the program incorporates a Technology-Across-the-Curriculum component, a Speaking-Across-the-Curriculum requirement, and minimum grade and writing requirements as stipulated in Florida's "Gordon Rule."

Technology-Across-the-Curriculum

Competence in basic technology skills is an essential component of life. Accordingly, NWF State College has incorporated technology throughout its programs and courses. Each two-year degree program contains at least one course that requires the student to demonstrate fundamental technology skills. All ENC 1101 - English Composition I classes are taught in a computer classroom, and students are required to complete assignments and other activities on a computer. CGS 1100 - Microcomputer Applications is a requirement or prerequisite course in many A.S. degrees. In support of the technology requirement, NWF State College offers student access to and technical support in open computer labs at all college sites.

B.A.S., B.S., A.A. and A.S. degree-seeking students will meet the computer technology skill requirement through completion of ENC 1101 and/or CGS 1100 and may encounter more advanced computer skills in other elective, technical or general education courses. See the course descriptions section of this catalog for the courses designated as part of the Technology-Across-the-Curriculum program.

Writing-Across-the-Curriculum

All associate degree students must complete at least one three-credit writing class as part of their general education program. Additional writing activities are required in all general education humanities courses. Bachelor of Applied Science, Bachelor of Science and Associate in Arts students must complete twelve (12) to fifteen (15) college credits from designated general education Gordon Rule Communication, Humanities and Social Science subject areas. See the A.A. General Education section of catalog for specific courses.

Speaking-Across-the-Curriculum (SATC)

Oral communication is an integral part of the NWF State College general education program; thus several general education courses include graded activities designed to build speaking and communication skills. All B.A.S., B.S., A.A., and A.S. degree-seekers must satisfy the Speaking-Across-the-Curriculum requirement and may do so by completing at least one of the general education courses designated as part of the Speaking-Across-the-Curriculum component of the General Education program. Students who successfully complete other speech, forensics, or oral interpretation courses may request that such courses be used to satisfy this requirement. See the A.A. General Education section of catalog for specific courses.

Gordon Rule Courses

Florida's Gordon Rule (FAC Rule 6A-10.030) includes a legislative mandate that all baccalaureate and Associate in Arts graduates successfully complete specific math and writing requirements. B.A.S., B.S. and A.A. graduates must have successfully completed at least 21 college credits from designated general education Gordon Rule Communication, Humanities, Social Science and Mathematics subject areas. A.S graduates must have successfully completed at least 9-12 college credits from designated general education Gordon Rule Communication, Humanities, Social Science and Mathematics subject areas (SATC Humanities may be replaced with General Humanities in the AS degree as long as Speaking-Across-the-Curriculum is met elsewhere. General Social Science may replace Gordon Rule Social Science, thus lowering the Gordon Rule requirement for the AS degree from 12 to 9 college credits).

All B.A.S., B.S., A.A., A.A.S, and A.S. degree-seekers must also earn a grade of "C" or higher in each Gordon Rule course used to satisfy general education requirements, whether the credits are earned at NWFSC or elsewhere.

Diversity Focus for Teacher Education Programs

Students who plan to enter any of the Teacher Education programs leading to certification must complete 6 credit hours of coursework with an international or diversity focus. Any course identified as meeting NWF State College's Diversity Requirement will fulfill this requirement, including foreign language courses.

Civic Literacy Competency

On May 16, 2018, the State Board of Education approved Rule 6A-10.02413, Florida Administrative Code (F.A.C.), Civic Literacy Competency, as required by section 1007.25(4), Florida Statutes (F.S.). The rule became effective on June 19, 2018. All first-time-in college associate in arts degree seeking students beginning in the 2018-19 academic year must demonstrate civic literacy competency prior to graduation either through successful completion of a course or by achieving a passing score on an assessment.

AA Degree General Education Requirements

Associate in Arts students must complete 60 college credits to complete the degree; 36 of these credits must be general education credits distributed across five subject area categories. A student must satisfy the required number of credits in each category. The remaining 24 elective credits should be selected in consultation with an advisor, who will assist with selecting the college credits most advantageous to the student's educational goals.

To assure that graduates of the state university and state college systems share a common base of General Education requirements, the State of Florida has designated general education core course options in each of five areas of study—Communication, Humanities, Mathematics, Natural Sciences, and Social Sciences. Beginning with students initially entering a Florida College System institution or state university in 2015-2016 and thereafter, each student must complete at least one identified core course (designated with ♦) in each area of study as part of the general education course requirements. Furthermore, NWF State College has embedded the core competencies of speaking, writing, and technology in both the AA and AS programs of study; by program design, all AA and AS graduates take courses that allow them to demonstrate their abilities in these important life skills.

AA General Education Requirements

Communications: 6

Students will demonstrate the ability to communicate effectively.

Students will demonstrate the ability to analyze communication critically.

A minimum grade of "C" in each Communications course is required for general education credit.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

♦ Core General Education
▲ Technology-Across-the Curriculum
¶ Writing requirements

Humanities: 6

Students will confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.

Students will acquire competence in reflecting critically upon the human condition.

A minimum grade of "C" in each Humanities course is required for general education credit.

- Choose one Core Humanities course and one General Humanities course, or
- Choose two Core Humanities courses.

Core Humanities

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

❖ **International and/or diversity focus**
¶ **Writing requirements**

General Humanities

AML 2010 - American Literature I

3 Credit Hours ¶
(Fall)

A course in American Literature from the pre-Colonial period to the Civil War. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2020 - American Literature II

3 Credit Hours ¶
(Spring)

A course in American Literature from Civil War to present. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: AML 2010 is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2060 - Architecture History

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in architecture from prehistoric to modern times. Architecture will be considered in terms of stylistic qualities, structural type, and intended usage. Topics will be addressed according to historical content, societal background, and geographical location. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2250 - Humanities – A Contemporary Perspective

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

This course is an integrated study of the artistic, cultural, philosophic, religious, social, and technological influences that shape modern western cultures in the modern era. The focus will begin with the 20th century and follow, chronologically, the issues of the modern era. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2700 - Humanities – Foreign Study

3 Credit Hours ❖ ¶
(Offered as needed)

A variable humanities content course designed to allow students first-hand learning experiences outside the United States. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2100 - World Literature I

3 Credit Hours ❖ ¶
(Fall)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from antiquity through the Renaissance, that reflect cultural and intellectual heritage. May be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet the Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2120 - World Literature II

3 Credit Hours ❖ ¶
(Spring)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from the Renaissance to the present, that reflect cultural and intellectual heritage. May be used as a humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: LIT 2100 is not a prerequisite for this course)

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

REL 2300 - Introduction to World Religions

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

This course will explore the principles and practices of the world's major religious traditions. The religions will be studied in their historical and contemporary forms. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2071 - Humanities – Cinema Appreciation

3 Credit Hours † ¶
(Fall, Spring, Summer)

An introduction to the origin, development, cultural aspects and analysis of cinema topics. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2300 - Dramatic Literature

3 Credit Hours † ¶
(Fall, Spring)

Survey of dramatic works from the Greeks to the 20th century, with emphasis on the plays of the 19th and 20th centuries; intensive investigation and script analysis with reports, lectures and discussions. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

† Speaking-Across-the Curriculum
❖ International and/or diversity focus
¶ Writing requirements

Mathematics: 6

Students will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

All Mathematics courses listed below meet Mathematics requirements outlined in FAC Rule 6A-10.030.

A minimum grade of "C" in each Mathematics course is required for general education credit.

- Choose one Core Mathematics course and one General Mathematics course, or
- Choose two Core Mathematics courses.

  (Any student who successfully completes a Mathematics course for which one of the general education core course options in Mathematics is an immediate prerequisite shall be considered to have completed the Mathematics core.)

Core Mathematics

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear,

quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites. Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting

techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ♦ **Core General Education**

General Mathematics

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and

determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAS 2103 - Linear Algebra

3 Credit Hours
(Offered as needed)

This is an introductory course in Linear Algebra intended to give students enough insight to enable successful pursuit of more abstract mathematics courses. This course includes the study of matrices and systems of equations, determinants, vector spaces, linear transformations, orthogonality, eigenvalues, and eigenvectors. Exercises using MATLAB will be required. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade or “C” or better, or equivalent.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

Natural Sciences: 6

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world.

- Choose one Biological Science course and one Physical Science course.
  At least one course must be a Core Natural Science course indicated by the ♦ symbol.

  (Any student who successfully completes a Science course for which one of the general education core course options in Science is an immediate prerequisite shall be considered to have completed the Science core.)

Biological Sciences

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the

subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

- ♦ **Core General Education**

Physical Sciences

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AST 1005 - Introduction to Astrobiology

3 Credit Hours
(Spring)

This course will explore the scientific evidence for the possibility, probability, and potential nature of life that might exist beyond the Earth. Contemporary discoveries about current and past conditions suitable for the origin of life on Mars and some of the moons orbiting other planets in our own solar system are reviewed in the context of what we understand about life on Earth. The question of life in other solar systems is also covered. Space travel and problems regarding intelligent extra-terrestrial beings visiting the Earth and intelligent life beyond the Earth but still within our own solar system are also discussed. All this is done in a fashion which integrates the various branches of science required to understand life beyond the Earth: Astronomy, Biology, Chemistry, Geology, and Physics. There are no prerequisites for this course and it may be taught in a team fashion by faculty members from various scientific disciplines.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

ISC 1003 - Natural Disasters – Causes, Consequences, Human Response

3 Credit Hours
(Fall, Spring, Summer)

This interdisciplinary course investigates natural catastrophic events, such as earthquakes, volcanic eruptions, tsunamis, hurricanes and floods. This class will use an environmental studies approach to examine how modern society exacerbates the damage caused by these natural phenomena and methods to mitigate human suffering. The student will gain an appreciation of humankind's relationship to the natural environment.

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

OCE 1013C - Aquatic Environmental Science

4 Credit Hours
(Offered as needed)

This course will investigate living and non-living components of aquatic ecosystems. Students will learn how aquatic ecosystems function naturally as well as how human activity can alter these ecosystems. The course is built around field trip(s) and lab work during which students will obtain water quality data from a local aquatic environment. Through field trip(s) and lab work, students will gain appreciation for the local relevance of course material. For both majors and non-majors, a key outcome of such experiences will be gaining experience in using inquiry and reasoning through the scientific method and becoming comfortable with data, technology, and instrumentation. Problem-solving, interpretation of data, and class discussions will be key.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- ♦ **Core General Education**

Social Sciences: 6

Students will demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Students will demonstrate an understanding of basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues, past and present, local and global.

- Choose one Behavioral Social Science course and one History/Government Social Science.
  At least one course must be a Core Social Science course indicated by the ♦ symbol, or
- Choose two History/Government Social Sciences courses.
  At least one course must be a Core Social Science course indicated by the ♦ symbol.

Behavioral Social Sciences

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ANT 2100 - Introduction to Archaeology

3 Credit Hours ❖
(Offered as needed)

Introduction to the fundamental principles, methods, and theories in archaeology. Includes a history of the development of archaeology, and examination of the nature of archaeological data and research, an introduction to archaeological data and analysis, and an examination of approaches to synthesis and interpretation. North and South American archeology is studied, but non-western examples are also studied to enhance an understanding of the development of the discipline in Europe and the Americas.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ♦ **Core General Education**
- ❖ **International and/or diversity focus**

History/Government Social Sciences

A minimum grade of "C" in each History/Government Social Science course is required for general education credit.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1012 - World Civilization I

3 Credit Hours ❖ ¶
(Fall)

A study of world history from 4000 BC to 1650 AD as it relates to the development of western civilization. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1022 - World Civilization II

3 Credit Hours ❖ ¶
(Spring)

A study of history from 1650 AD to the present as it relates to the development of the modern world. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ♦ **Core General Education**
- ❖ **International and/or diversity focus**
- ¶ **Writing requirements**

Additional General Education Credits: 6

Additional General Education Credits should be selected in alignment with a student's choice of transfer major. Any general education hours over a total of 36 will apply as electives in the AA degree. Consult with an academic advisor for assistance.

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management,

presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences.

While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain

programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

- ___ ____ - Any A.A. General Education Communications, Mathematics, Humanities, Natural Science, or Social Science course
  - ♦ **Core General Education**
  - **† Speaking-Across-the Curriculum**
  - **▲ Technology-Across-the Curriculum**
  - ❖ I**nternational and/or diversity focus**

Total AA General Education Credits Required: 36

Footnote Legend

Symbol	Description
♦	Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
▲	Courses listed with this symbol address NWF State College's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.
†	Courses listed with this symbol address NWF State College's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
❖	Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶	Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Degree Checklist:

- Have you completed a minimum of 60 credit hours in the following areas?
    - 36 Hours of General Education
        - 6 hours in Communications ("C" or better)
        - 6 hours in Mathematics ("C" or better)
        - 6 hours in Humanities ("C" or better)
        - 6 hours in Natural Science
        - 6 hours in Social Sciences ("C" or better in History/Government Social Science category)
        - 6 hours in Additional General Education Credits (if needed)
    - 24 hours of college credit A.A. transferable electives
- Have you completed at least 15 of the 60 credits at NWF State College?
- Have you completed the foreign language requirement?
- Have you met the minimum 2.0 GPA requirements for the A.A.?
- Have you met the Civic Literacy Competency requirement for the A.A?
- Have you applied for graduation by the advertised deadline?

AAS Degree General Education Requirements

All A.A.S. degree programs at NWF State College require a minimum of 18 college credits in general education. Unless otherwise specified in the program requirements, students must complete one course from each of the following categories to meet general education requirements.

To assure that graduates of the state university and state college systems share a common base of General Education requirements, the State of Florida has designated general education core course options (designated with ♦) in each of five areas of study—Communication, Humanities, Mathematics, Natural Sciences, and Social Sciences. The A.A.S. degree programs provide flexibility for entering the job market or continuing education. Students who take general education courses are guaranteed transfer of those courses when continuing their education within the Florida College and University System.

NWF State College has embedded the core competencies of speaking, writing, and technology in both the AA, AS, and AAS programs of study; by program design, all AA and AS graduates take courses that allow them to demonstrate their abilities in these important life skills.

Communications: 3

Students will demonstrate the ability to communicate effectively.

Students will demonstrate the ability to analyze communication critically.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

- ___ ____ - Any other AA General Education Communications Course
  - ♦ **Core General Education**
  - ▲ **Technology-Across-the Curriculum**
  - ¶ **Writing requirements**

Humanities: 3

Students will confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.

Students will acquire competence in reflecting critically upon the human condition.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

Rich Text Editor, text_description, Press ALT 0 for help

- ___ ____ - Any other AA General Education Humanities course with the **†** symbol or any General Education Humanities course AND another course with the **†** symbol.
  ♦ Core General Education
  † Speaking-Across-the Curriculum
  ❖ International and/or diversity focus
  ¶ Writing requirements

Mathematics: 3

Students will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites.
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR

(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

___ ____ - Any other AA General Education Mathematics course

♦ **Core General Education**

Natural Sciences: 3

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world.

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Natural Science course
  - ♦ **Core General Education**

Social Sciences: 3

Students will demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Students will demonstrate an understanding of basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues, past and present, local and global.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Social Science course
  - ♦ **Core General Education**
  - ❖ I**nternational and/or diversity focus**
  - ¶ **Writing requirements**

Additional General Education Credits: 3

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

- ___ ____ - Any other AA General Education course

♦ Core General Education
† Speaking-Across-the Curriculum
▲ Technology-Across-the Curriculum
❖ International and/or diversity focus

Total AAS General Education Credits Required: 18

Footnote Legend

Symbol	Description
♦	Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲	Courses listed with this symbol address NWF State College's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.
†	Courses listed with this symbol address NWF State College's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
❖	Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶	Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AAS Degree Checklist:

- Have you completed a minimum of 18 credit hours in the following areas?
    - 3 hours in Communications
    - 3 hours in Humanities
    - 3 hours in Social Sciences
    - 3 hours in Mathematics
    - 3 hours in Natural Sciences
    - 3 Additional hours in General Education Credits
- Have you completed the required Core and Technical Elective course work for your A.A.S. degree?
- Have you completed at least 25% of the total number of credits for your A.A.S. degree at NWF State College?
- Have you met the minimum 2.0 GPA requirements for the A.A.S.?
- Have you applied for Graduation by the advertised deadline?

AS Degree General Education Requirements

All A.S. degree programs at NWF State College require a minimum of 18 college credits in general education. **Unless otherwise specified in the program requirements**, students must complete one course from each of the following categories to meet general education requirements.

To assure that graduates of the state university and state college systems share a common base of General Education requirements, the State of Florida has designated general education core course options (designated with ♦) in each of five areas of study—Communication, Humanities, Mathematics, Natural Sciences, and Social Sciences. The A.S. degree programs provide flexibility for entering the job market or continuing education. Students who take general education courses are guaranteed transfer of those courses when continuing their education within the Florida College and University System.

NWF State College has embedded the core competencies of speaking, writing, and technology in both the AA and AS programs of study; by program design, all AA and AS graduates take courses that allow them to demonstrate their abilities in these important life skills.

Communications: 3

Students will demonstrate the ability to communicate effectively.

Students will demonstrate the ability to analyze communication critically.

A minimum grade of "C" in each Communications course is required for general education credit.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ___ ____ - Any other AA General Education Communications Course
  ♦ Core General Education
  ▲ Technology-Across-the Curriculum
  ¶ Writing requirements

Humanities: 3

Students will confirm the ability to think critically through demonstrating interpretive ability and cultural literacy.

Students will acquire competence in reflecting critically upon the human condition.

A minimum grade of "C" in Humanities courses is required for general education credit.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading

achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading

achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ___ ____ - Any other AA General Education Humanities course with the **†** symbol or any General Education Humanities course AND another course with the **†** symbol.
  ♦ Core General Education
  † Speaking-Across-the Curriculum
  ❖ International and/or diversity focus
  ¶ Writing requirements

Mathematics: 3

Students will determine appropriate mathematical and computational models and methods in problem solving, and demonstrate an understanding of mathematical concepts.

Students will apply appropriate mathematical and computational models and methods in problem solving.

All Mathematics courses listed below meet Mathematics requirements outlined in FAC Rule 6A-10.030.

A minimum grade of "C" in Mathematics courses is required for general education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites.
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Mathematics course
  - ♦ **Core General Education**

Natural Sciences: 3

Students will demonstrate the ability to critically examine and evaluate scientific observation, hypothesis, or model construction, and to use the scientific method to explain the natural world.

Students will successfully recognize and comprehend fundamental concepts, principles, and processes about the natural world.

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the

subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Natural Science course
  - ♦ **Core General Education**

Social Sciences: 3

Students will demonstrate the ability to examine behavioral, social, and cultural issues from a variety of points of view.

Students will demonstrate an understanding of basic social and behavioral science concepts and principles used in the analysis of behavioral, social, and cultural issues, past and present, local and global.

A minimum grade of "C" in courses with the ¶ symbol is required for general education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ___ ____ - Any other AA General Education Social Science course
  - ♦ **Core General Education**
  - ❖ I**nternational and/or diversity focus**
  - ¶ **Writing requirements**

Additional General Education Credits: 3

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

- ___ ____ - Any other AA General Education course
  - ♦ **Core General Education**
  - **† Speaking-Across-the Curriculum**
  - **▲ Technology-Across-the Curriculum**
  - ❖ I**nternational and/or diversity focus**

Total AS General Education Credits Required: 18

Footnote Legend

Symbol	Description
♦	Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲	Courses listed with this symbol address NWF State College's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.
†	Courses listed with this symbol address NWF State College's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
❖	Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶	Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AS Degree Checklist:

- Have you completed a minimum of 18 credit hours in the following areas?
    - 3 hours in Communications – ("C" or better)
    - 3 hours in Humanities – ("C" or better)
    - 3 hours in Social Sciences
    - 3 hours in Mathematics ("C" or better)
    - 3 hours in Natural Sciences
    - 3 Additional hours in General Education Credits
- Have you completed the required Core and Technical Elective course work for your A.S. degree?
- Have you completed at least 25% of the total number of credits for your A.S. degree at NWF State College?
- Have you met the minimum 2.0 GPA requirements for the A.S.?
- Have you applied for Graduation by the advertised deadline?
- Check to see if you qualify for any of the companion Certificates listed for your A.S. degree and complete a separate graduation application for each one.

Bachelor Degrees

- BAS Program Information
- BAS Graduation Requirements

- BS in Early Childhood Education Program Information
- BS in Teacher Education Program Information
- BS in Early Childhood Education Graduation Requirements
- BS in Teacher Education Graduation Requirements

- BS in Nursing Program Information and Graduation Requirements

Bachelor Degrees

Bachelor of Applied Science (BAS) Degree

BAS in Management and Supervision Degree
BAS in Project Management Degree

NWF State College is approved by the State of Florida Board of Education to offer the **Bachelor of Applied Science Degree in Project Management (BAS)** and the **Bachelor of Applied Science Degree in Management and Supervision (BAS)**.

The BAS degree offers students a unique opportunity to gain the skills and knowledge necessary for career advancement in a variety of areas. Program content has been developed with input from local employers and is reflective of traditional business management degrees, as well as of the technical skills identified by various professional organizations.

There are four pre-planned areas of emphasis in the **Management and Supervision** program. Areas of specialization include:

- Healthcare Management
- Human Resources Management
- Military Science and Leadership
- Supervision

There are five pre-planned areas of emphasis in the **Project Management** program. Areas of specialization include:

- Acquisitions
- Logistics
- Project Management
- Quality Improvement
- Technology Management

The BAS program provides a career-ladder for students who have already completed an associate's degree and who wish to continue their education at the bachelor's level, or beginning students may design a program of study for the degree as early as the freshman year if they have not yet obtained an associate's degree.

Coursework for the degree is designed with the working student in mind and is offered with classes available evenings, weekends, in concentrated fast-track terms, through eCampus/Distance Learning, or structured as "blended/hybrid" classes (part traditional classroom and part non-traditional format). Coursework incorporates

internships, seminars, and other work-based learning activities designed to ensure students acquire the latest skills and content. Students receive the full range of articulation and transfer rights guaranteed by Florida law through common course numbering and the statewide articulation agreement.

Graduation Requirements for the BAS Degrees

Students seeking a Bachelor of Applied Science degree must meet the following requirements:

- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete A.A. General Education requirements, including all Gordon Rule course requirements with minimum grades ("C").
- Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
- Successfully complete at least forty (40) credits of approved upper division coursework in the major.
- Complete at least 50% of the upper division program course work in residence at NWF State College.
- Complete a minimum of one hundred and twenty (120) college credits applicable toward the BAS degree.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Bachelor of Applied Science

Management and Supervision - Health Care Management (BAS)

Admission Program of Study Code BSHC
State CIP Code 1105202991

See the BAS Management and Supervision Program Flowchart.

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****

- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Healthcare Management

HSA 3110 - Health Care Organization and Management

3 Credit Hours
(Spring)

This course focuses on the structure and management of health care organizations, and the fundamental issues facing the U.S. health care system. Key topics include health status, the organization of health services, manpower, public health, financing, facilities, utilization, quality, regulation, and national health policy.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3111 - Introduction to Health Care Management

3 Credit Hours
(Fall)

This course studies the administration, organization and delivery of health care in the United States. Topics to be examined include health care leadership, management, strategy, performance improvement, information technology, insurance, financial and human resources management, as well as ethical and legal concepts.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4191 - Health Information Systems

3 Credit Hours
(Fall)

This course focuses on the theories, concepts and principles of health information systems and development of critical thinking skills for use in practice/working in health care informatics. Current trends and issues in using, designing, and managing heath care information systems will be examined. Students, applying evidence-based knowledge, will analyze the design and implementation of health care information systems.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4922 - Capstone: Health Care Management

3 Credit Hours
(Spring)

This course integrates the information, skills, and abilities provided throughout the Health Administration Program in a capstone project. Students complete a project that demonstrates excellence by applying the knowledge gained from the core courses and materials studied throughout the program. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

Prerequisite(s): senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Total Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Health Care Management (BAS) (BSHC)
First Year
Fall Semester GEB 3213 - Business and Administrative Communication **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

HSA 3111 - Introduction to Health Care Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

BUL 3320 - Law and Business **3 Credit Hours**

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

HSA 3110 - Health Care Organization and Management **3 Credit Hours**

MAN 3240 - Organizational Behavior **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MAR 4333 - Marketing Strategy **3 Credit Hours**

HSA 4191 - Health Information Systems **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

HSA 4922 - Capstone: Health Care Management **3 Credit Hours**

MAN 4720 - Strategic Planning and Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15
Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Management and Supervision - Human Resources Management (BAS)

Admission Program of Study Code BSHR
State CIP Code 1105202991

See the BAS Management and Supervision Program Flowchart.

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Human Resources Management

HUS 4950 - Capstone: Human Resources Management

3 Credit Hours
(Spring)

This capstone will build upon and integrate the primary human resource management skills introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge in the field of human resources.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3310 - Issues in Human Resource Management

3 Credit Hours
(Fall)

Introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. Approach will focus on current issues and applications.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3320 - Employee Staffing and Benefits

3 Credit Hours
(Fall)

An intermediate level course in employment staffing issues focusing on staffing patterns, organizational structures, job analysis and design, staffing efficiencies, employee assistance programs, staff projection models, and employee services.

Prerequisite(s): upper division standing and MAN 3310 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3350 - Training and Development

3 Credit Hours
(Fall)

Covers various staff training and development models, effective workshop techniques, designing and implementing company-wide training and development programs. Assessment of training needs, training and development as a benefit and setting development goals; students will design and conduct at least one workshop/training session for fellow students.

Prerequisite(s): upper division standing and GEB 3213 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Total Technical Elective Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Human Resources Management (BAS) (BSHR)
First Year
Fall Semester GEB 3213 - Business and Administrative Communication **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** MAN 3310 - Issues in Human Resource Management **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 3320 - Law and Business **3 Credit Hours** ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** MAN 3320 - Employee Staffing and Benefits **3 Credit Hours**

MAN 3240 - Organizational Behavior **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** FIN 4402 - Financial and Economic Management **3 Credit Hours** MAR 4333 - Marketing Strategy **3 Credit Hours** MAN 3350 - Training and Development **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HUS 4950 - Capstone: Human Resources Management **3 Credit Hours** MAN 4720 - Strategic Planning and Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Management and Supervision - Military Science and Leadership (BAS)

Admission Program of Study Code BSMS

State CIP code 1105202991

See the BAS Management and Supervision Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- ____ ____ - General Education Biological Sciences **3 Credit Hours***
- ____ ____ - General Education Physical Sciences **3 Credit Hours***
- ____ ____ - History/Government Social Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Military Science and Leadership

MSL 3201 - Adaptive Team Leadership

3 Credit Hours
(Fall)

Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3202 - Leadership in Changing Environments

3 Credit Hours
(Spring)

Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, and apply principles and techniques of effective written and oral communication.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4301 - Developing Adaptive Leaders

3 Credit Hours
(Fall)

Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply leadership and problem solving principles to a complex case study/simulation.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4302 - Leadership in a Complex World

3 Credit Hours
(Spring)

Capstone course to explore topics relevant to second lieutenants entering the army, describe legal aspects of decision making and leadership, analyze army organization from tactical to strategic level.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

These hours should be designed as a progression towards a student's future workforce or educational goals.

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

Total Program Credits Required: 120

Suggest Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Military Science and Leadership (BAS)
First Year
Fall Semester GEB 3213 - Business and Administrative Communication **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** MSL 3201 - Adaptive Team Leadership **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 3320 - Law and Business **3 Credit Hours** ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** MAN 3240 - Organizational Behavior **3 Credit Hours**

MSL 3202 - Leadership in Changing Environments **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MSL 4301 - Developing Adaptive Leaders **3 Credit Hours**

MAR 4333 - Marketing Strategy **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

MAN 4720 - Strategic Planning and Management **3 Credit Hours**

MSL 4302 - Leadership in a Complex World **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Management and Supervision - Supervision (BAS)

Admission Program of Study Code BSSP
State CIP Code 1105202991

See the BAS Management and Supervision Program Flowchart.

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the

sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social

reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Supervision

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3903 - Operations Research

3 Credit Hours
(Fall)

Operations Research is a science of modeling and optimization. It allows to model real-world problems by using mathematics, statistics and computers. It provides us the tools and theories to solve real-world problems by finding the optimal solutions to models subject to constraints of time, labor, resource, materials and business rules. With Operations Research, people make intelligent decisions to develop and manage their processes and businesses.

Prerequisite(s): Upper division standing is required. STA 2023, MAC 1140, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4940 - Capstone: Supervision

3 Credit Hours
(Spring)

This capstone course will build upon and integrate the primary management skills and concepts introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge. This course will also cover basic entrepreneurial principles, which will be integrated throughout the student-led projects.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining core and emphasis business courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR

PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Management and Supervision - Supervision (BAS) (BSSP)
First Year
Fall Semester GEB 3213 - Business and Administrative Communication **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** MAN 3903 - Operations Research **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 3320 - Law and Business **3 Credit Hours** ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** MAN 3240 - Organizational Behavior **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester

FIN 4402 - Financial and Economic Management **3 Credit Hours** MAN 3593 - Logistics and Supply Chain Management-DNU **3 Credit Hours** MAR 4333 - Marketing Strategy **3 Credit Hours** QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ISM 4011 - Information Systems Management **3 Credit Hours** MAN 4720 - Strategic Planning and Management **3 Credit Hours** MAN 4940 - Capstone: Supervision **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Acquisitions (BAS)

Admission Program of Study Code BSAQ
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**

- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues;

includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas:

corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required courses for the Emphasis in Acquisitions

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4931 - Acquisition Law Seminar

3 Credit Hours
(Spring)

This course addresses contract law as applicable to formation and administration of contracts with private and governmental agencies, with emphasis on the federal government. The following topics are also included: concepts of responsiveness and responsibility, bidding procedures, mistakes, negotiation procedures, changes, claims and dispute resolution. Students will explore the typical contracting problems that can lead to litigation.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3574 - Acquisition Management

3 Credit Hours
(Spring)

Students will be exposed to the fundamentals of government acquisitions. This course provides conceptual material on government acquisitions, to include program planning, execution, and control. Students will be introduced to the elements of program risk and learn risk management techniques. The systems engineering process will be emphasized to include work breakdown structures, cost -- benefit analysis, and scheduling.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4930 - Capstone: Acquisition Management

3 Credit Hours
(Spring)

In this seminar, students will have the opportunity to participate in hands-on projects applying the techniques in MAN 3574 - Acquisition Management. Emphasis will be on government acquisition management. Students will create a work-breakdown structure, a project schedule, and perform a cost-benefit analysis of alternatives. Earned value management will be introduced as a method of program control. Students will also identify potential risk areas and suggest mitigation plans.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Acquisitions (BAS) (BSAQ)

First Year

Fall Semester

GEB 3031 - Contemporary Business Practices **3 Credit Hours**

GEB 3213 - Business and Administrative Communication **3 Credit Hours**

BUL 3320 - Law and Business **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3574 - Acquisition Management **3 Credit Hours**

MAN 3583 - Project Management **3 Credit Hours**

BUL 4333 - Contract Formation and Administration **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

GEB 3444 - Business Trends and Issues **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

BUL 4931 - Acquisition Law Seminar **3 Credit Hours** FIN 4402 - Financial and Economic Management **3 Credit Hours** MAN 4930 - Capstone: Acquisition Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Logistics (BAS)

Admission Program of Study Code BSLG
State CIP Code 1105202021

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Logistics

ENV 4610 - Sustainable Logistics

3 Credit Hours
(Spring)

This course introduces students to current and future trends in logistics technology, policy and sustainability. Topics

include, source sustainability, environmental impacts of existing and emerging technologies, and local environmental conditions and the global climate.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3505 - Production Operations and Logistics Management

3 Credit Hours
(Spring)

This course examines the integration of production operations and logistics management and how this enables an organization to compete successfully in business. Special emphasis is placed on the relationships that exist between operations and the supply chain to include operations and supply chain strategies, business processes, project management, product design and development, and inventory management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4570 - Purchasing and Materials Management

3 Credit Hours
(Fall)

The management of purchasing and the materials for production processes. Cost/price analysis, computer systems, forecasting, materials requirements, negotiations, and contracting are included.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

These hours should be designed as a progression towards a student's future workforce or educational goals.

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

Project Management – Logistics (BAS)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** MAN 3583 - Project Management **3 Credit Hours** MAN 3593 - Logistics and Supply Chain Management **3 Credit Hours** MAN 3505 - Production Operations and Logistics Management **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester GEB 3434 - Ethics for Business Leaders **3 Credit Hours** GEB 3444 - Business Trends and Issues **3 Credit Hours** MAN 4570 - Purchasing and Materials Management **3 Credit Hours** QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** Technical Elective **3 Credit Hours**

Total Semester Hours: 15
Spring Semester ENV 4610 - Sustainable Logistics **3 Credit Hours** FIN 4402 - Financial and Economic Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Project Management (BAS)

Admission Program of Study Code BSPR
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Project Management

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3120 - Leadership and Group Dynamics

3 Credit Hours
(Spring)

An applied leadership course with a focus on case studies, projects and group interaction; includes theoretical background on group dynamics, small group behavior and motivation, power, types of groups, verbal and non-verbal communication skills and team-building. Emphasis will be placed on sociological and psychological dimensions of inter-group relations, including analysis and problem-solving through simulations, cases and similar activities which reflect a general business perspective, as well as leadership and group dynamics across a variety of business units/functions.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and MAN 3052, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

- ____ ____ Approved Upper Division Elective **3 Credit Hours**

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Project Management (BAS) (BSPR)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3120 - Leadership and Group Dynamics **3 Credit Hours**

MAN 3583 - Project Management **3 Credit Hours**

BUL 4333 - Contract Formation and Administration **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

GEB 3444 - Business Trends and Issues **3 Credit Hours**

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Approved Upper Division Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MAN 4931 - Capstone: Project Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Quality Improvement (BAS)

Admission Program of Study Code BSQU
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for

development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Quality Improvement

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4520 - Quality Management

3 Credit Hours
(Spring)

This course examines the significance of quality as a primary competitive strategy for tomorrow's successful business organizations. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations functions. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, field trips and outside speakers. The students are expected to gain insight and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management. This course is appropriate for students who have an interest in: (1) managing the total quality program in a business organization, and/or (2) working for a business organization which already made a strong commitment to total quality management.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4555 - Quality Certification: ISO 9000

3 Credit Hours
(Fall)

A comprehensive study of internationally uniform quality standards (ISO 9000 and the steps to individual and organizational certification; includes management responsibility, quality system documentation, contract review, design control, process control, inspection and testing, corrective actions and other certification topics.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Technical Electives Course Requirements: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Quality Improvement (BAS) (BSQU)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours**

MAN 3052 - Management Philosophy and Practice **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours**

MAN 3583 - Project Management **3 Credit Hours**

MAN 3593 - Logistics and Supply Chain Management-DNU **3 Credit Hours**

MAN 4520 - Quality Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

MAN 4555 - Quality Certification: ISO 9000 **3 Credit Hours**

GEB 3434 - Ethics for Business Leaders **3 Credit Hours**

GEB 3444 - Business Trends and Issues **3 Credit Hours**

QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

FIN 4402 - Financial and Economic Management **3 Credit Hours**

MAN 4931 - Capstone: Project Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Project Management - Technology Management (BAS)

Admission Program of Study Code BSTM
State CIP Code 1105202021

See the BAS Project Management Program Flowchart

Lower Division Requirements

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- _____ _____ - Core Humanities **3 Credit Hours**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- STA 2023 - Statistics or other Core Mathematics **3 Credit Hours ♦**
- MAC 1105 - College Algebra or other General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits: 36

Lower Division Electives: 24

Total Lower Division (Associate Degree) Requirements: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements*

Core Requirements

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for

development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Requirements: 30

Required Courses for the Emphasis in Technology Management

ISM 3220 - Network Technologies for Information Professionals

3 Credit Hours
(Fall)

This course is designed to give the student an understanding of the various networking technologies and their practical application in the management of a business. The course also covers the technical issues involved in designing and implementing an efficient network for voice, data, and information networks.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3232 - Software Essentials

3 Credit Hours
(Fall)

This course covers a broad range of software topics as they apply to software management and systems analysis and design. Topics include, but are not limited to programming, the systems development life cycle (SDLC), systems management, interface design and Internet technology.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3323 - Applications in Information Security

3 Credit Hours
(Spring)

This course helps develop the important security concepts relative to software application development and access control that provide the knowledge and skills necessary for the successful management of information security in an organization. Students will understand the environment where software is designed and developed as well as the critical role software plays in providing security to an organization's information systems. The course focuses on software development concepts that relate to security, and how access control methodologies fit into the entire enterprise architecture.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

Total Emphasis Requirements: 12

Technical Electives*

Students will work with an advisor to develop a program of study that includes upper division technical electives from the approved list below:

ACG
BUL
GEB
HSA
ISM

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAN
MAR
PAD

Total Electives Course Requirement: 18

Total Upper Division Credits Required*: 60

*Depending on the student's associate's degree, with department approval, some lower division credits may be substituted for upper division credits in the technical electives area.

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Project Management - Technology Management (BAS) (BSTM)
First Year
Fall Semester GEB 3031 - Contemporary Business Practices **3 Credit Hours** GEB 3213 - Business and Administrative Communication **3 Credit Hours** ISM 3232 - Software Essentials **3 Credit Hours** MAN 3052 - Management Philosophy and Practice **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 3083 - Accounting: Concepts and Practice **3 Credit Hours** BUL 3320 - Law and Business **3 Credit Hours** MAN 3583 - Project Management **3 Credit Hours**

ISM 3323 - Applications in Information Security **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester ISM 3220 - Network Technologies for Information Professionals **3 Credit Hours** GEB 3434 - Ethics for Business Leaders **3 Credit Hours** GEB 3444 - Business Trends and Issues **3 Credit Hours** QMB 3250 - Quantitative Methods for Business Decisions **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester FIN 4402 - Financial and Economic Management **3 Credit Hours** ISM 4011 - Information Systems Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Upper Division Program Hours: 60

Return to BAS Degree (PM)

Return to Bachelor of Applied Science (BAS) Degree

Bachelor of Science (BS) Degree in Education

BS in Early Childhood Education, Birth through Four Degree

The **Bachelor of Science Degree in Early Childhood Education, Birth through Four** is designed to prepare students to work in programs serving children ages 0-4 years. Graduates will be prepared to advance in the Early Childhood career field. The degree offers a career ladder for students earning the Associate of Science in Early Childhood Education at NWF State College, which includes the state-mandated prerequisite courses. Students

earning an A.A. may also enter this program after completing the state-mandated prerequisite courses. Coursework is designed for the working adult, utilizing weekend, evening, and hybrid classes.

BS in Teacher Education Degrees

NWF State College is approved by the Florida Board of Education to offer three bachelor's degrees leading to state certification in teacher education: the **Bachelor of Science in Elementary Education**, the **Bachelor of Science in Middle Grades General Science Education** and the **Bachelor of Science in Middle Grades Mathematics Education**. These degrees are designed to provide a career ladder for those who have already completed an Associate in Arts (A.A.) degree or have 60 hours of acceptable lower division coursework and who wish to continue their education at the bachelor's level. The Bachelor of Science in Elementary Education also includes endorsements in Reading and English as a Second Language.

Graduation Requirements for BS in Childhood Education, Birth through Four Degree

Students seeking a Bachelor of Science degree in Childhood Education, Birth through Four must meet the following requirements:

- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Earn a minimum grade ("C") in all upper division course work.
- Successfully complete all coursework within the major field of study with a cumulative GPA of at least 2.00.
- Complete A.A. General Education requirements, including all Gordon Rule course requirements with minimum grades ("C").
- Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
- Complete at least 50% of the upper division program course work in residence at NWF State College.
- Complete a minimum of one hundred and twenty (120) college credits applicable toward the B.S. degree.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Graduation Requirements for BS in Teacher Education Degree

Students seeking a Bachelor of Science degree in Education must meet the following requirements:

- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Earn a minimum grade ("C") in all upper division course work.
- Successfully complete all coursework within the major field of study with a cumulative GPA of at least 2.50.
- Complete A.A. General Education requirements, including all Gordon Rule course requirements with minimum grades ("C").

- Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
- Complete at least 50% of the upper division program course work in residence at NWF State College.
- Pass the three Florida Teacher Certification Examinations: General Knowledge, Professional Education and appropriate Subject Area.
- Complete a minimum of one hundred and twenty (120) college credits applicable toward the B.S. degree.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Bachelor of Science

Early Childhood Education, Birth through Four (BS)

Admission Program Objective Code BSEB
State CIP Code 1101312102

The Bachelor of Science in Early Childhood Education, Birth through Four is designed to prepare students to work in programs serving children ages 0-4 years. Graduates will be prepared for advancement in the Early Childhood career field. The degree offers a career ladder for students earning the Associate of Science in Early Childhood Education at NWF State College, which includes one state-mandated prerequisite courses. A.S. students will complete an additional 18 hours of General Education classes during their upper division coursework, after admission to the Early Childhood Education program. Students earning an A.A. may also enter this program after completing the state-mandated prerequisite courses. These students will complete technical classes during their upper division coursework after admission to the Early Childhood Education program. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements.

Lower Division Requirements

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

Students entering with an A.S. or A.A.S. degree will have 18 General Education hours and will complete the remaining 18 within the B.S. in Early Childhood coursework.

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶** (meets 3 hours of diversity credits)
- _____ _____ - Core Humanities **3 Credit Hours**
- MGF 1106 - Practical Applications of Mathematics or other Core Mathematics **3 Credit Hours ♦**
- ___ ___ - General or Core Mathematics **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- WOH 1012 - World Civilization I **3 Credit Hours ❖ ¶** ** OR WOH 1022 - World Civilization II **3 Credit Hours ❖ ¶** **(meets 3 hours of diversity credits)
- SYG 2000 - Sociology **3 Credit Hours ❖ ♦** **(meets 3 hours of diversity credits)

- ____ ____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

State-Mandated Prerequisites

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

Total State-Mandated Prerequisite Credits Required: 3

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000.

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Requirements

Program Content Courses

Students entering with an A.S. or A.A.S. degree will complete 18 General Education hours within the B.S. in Early Childhood coursework. Students entering with an A.A. degree will complete 18 hours of Early Childhood technical coursework within the B.S. in Early Childhood, in accordance with a signed program of study designed by a program advisor.

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEC 3213 - Teaching the Language Arts In Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on the development of language and literacy in children ages birth through age four. Emphasis will be placed on understanding the process of emergent literacy including vocabulary and language, phonological awareness, print knowledge and comprehension; and on designing a developmentally appropriate language arts program in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3227 - Art, Music, and Movement

3 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of the creative developmental process in the life of children from birth through four years old. Emphasis will be placed on the teacher's role in developing opportunities and materials for young children to express themselves creatively through music, drama, dance and two- and three-dimensional art and on providing varied opportunities for young children to gain an appreciation of art, music, drama, and dance in ways that reflect cultural diversity in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies

3 Credit Hours
(Offered as needed)

This course is designed to prepare students to teach social studies In the early childhood classroom. Emphasis is on implementing the project approach to investigate components of social studies to include: individual development and identity; people, places, and environments, technology and our world; and civic ideals and practices. The student will increase and apply knowledge and skills in the Florida Early Learning and Developmental Standards relevant to this content area.

EEC 3511 - Curriculum for Infants and Toddlers

3 Credit Hours
(Offered as needed)

The focus of this course will be on the design, implementation and evaluation of programming and curriculum that promotes growth and development of young children birth to three years old and aligns with the early learning and developmental standards. Study of typical and atypical development will be included. Emphasis will be on working effectively with families of infants and toddlers.

EEC 3524 - Professionalism/Program Development

4 Credit Hours
(Offered as needed)

Focus of this course will be on management and leadership in early childhood education programs. Topics will include mentoring adults, professional development, staff assessment, program evaluation, and child advocacy.

Career options in the field of early childhood education will be explored. This course will require observing and participating in a program or agency related to early childhood education.

EEC 4404 - Families and Diversity

3 Credit Hours
(Offered as needed)

This course will focus on building positive relationships with families through communication and involvement. Focus will include developing an awareness of diversity and multicultural considerations in working with families of young children. The course will explore the role of the family and the influence of the community on the development of young children in a diverse society; and will prepare the student to work effectively with families and communities.

EEC 4421 - Teaching Math and Science in Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of how concepts, skills and attitudes in early childhood mathematics and science are developed in young children ages birth through age four. Math topics will include number sense and operations, patterns, geometry, and measurement. Science topics will include scientific inquiry, physical science, life science and earth science. Emphasis will be on the alignment of the Early Learning and Developmental Standards with a developmentally appropriate approach to teaching math and science in the early childhood classroom. This course will require observing and participating in an early childhood classroom.

EEC 4613 - Systematic Observation and Assessment

3 Credit Hours
(Offered as needed)

The focus of this course will be on understanding the purpose of child assessment, implementing developmentally appropriate practices in formal and informal child assessment, and using assessment results to support learning, to identify special needs, to evaluate programs, and to respond to program accountability requirements. A field experience is required to practice various methods of assessment in an early childhood setting.

EEC 4940 - Internship

9 Credit Hours
(Fall, Spring)

Supervised teaching in an assigned Early Childhood Education setting. Student teaching assignments will be made by the Department of Teacher Education Office. This course requires a minimum grade of "C". Current background check (fingerprinting) is required for this course.

Prerequisite(s): Upper Division standing with permission of Department Chair

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing

and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEX 3604 - Classroom Management in Early Childhood Education

3 Credit Hours
(Offered as needed)

The focus of this course is on implementing effective classroom management practices including establishing an appropriate physical environment, setting up appropriate classroom routines and rules and creating a positive classroom community. Emphasis will be on strategies for guiding children's behavior, teaching social problem-solving skills and responding appropriately to challenging behaviors.

EEX 4201 - Young Children with Special Needs

3 Credit Hours
(Offered as needed)

The focus of this course will be on working with young children birth through age four in an inclusive early childhood classroom. Emphasis will be on identifying typical and atypical development, creating an inclusive early childhood learning environment, understanding special education law, developing an awareness of resources for inclusive practice to meet the needs of young children and their families.

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Early Childhood Education, Birth through Four (BS) (BSEB) - For students admitted with an AS degree
First Year
Fall Semester EEC 3227 - Art, Music, and Movement **3 Credit Hours** EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies **3 Credit Hours** General Education Course **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 12**

Spring Semester

EEC 4404 - Families and Diversity **3 Credit Hours**

EEC 3511 - Curriculum for Infants and Toddlers **3 Credit Hours**

EEC 3524 - Professionalism/Program Development **4 Credit Hours**

EEC 3213 - Teaching the Language Arts In Early Childhood Education **4 Credit Hours**

Total Semester Hours: 14

Summer Semester

EEX 4201 - Young Children with Special Needs **3 Credit Hours**

EEC 4421 - Teaching Math and Science in Early Childhood Education **4 Credit Hours**

General Education Course **3 Credit Hours**

Total Semester Hours: 10

Second Year

Fall Semester

EEC 4613 - Systematic Observation and Assessment **3 Credit Hours**

General Education Course **2 Credit Hours**

General Education Course **4 Credit Hours**

Total Semester Hours: 12

Spring Semester

EEC 4940 - Internship **9 Credit Hours**

General Education Course **3 Credit Hours**

Total Semester Hours: 12

Total Upper Division Program Hours: 60

Early Childhood Education, Birth through Four (BSEB) - For students admitted with an AA degree

First Year

Fall Semester

EEC 3227 - Art, Music, and Movement **3 Credit Hours**

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies **3 Credit Hours**

EEC 2732 - Child Nutrition, Health and Safety **3 Credit Hours**

EEC 1201 - Infants and Toddlers **3 Credit Hours**

EEX 2010 - Introduction to Exceptional Children **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

EEC 4404 - Families and Diversity **3 Credit Hours**

EEC 3511 - Curriculum for Infants and Toddlers **3 Credit Hours**

EEC 3524 - Professionalism/Program Development **4 Credit Hours**

EEC 3213 - Teaching the Language Arts In Early Childhood Education **4 Credit Hours**

Total Semester Hours: 14

Summer Semester

EEX 4201 - Young Children with Special Needs **3 Credit Hours**

EEC 4421 - Teaching Math and Science in Early Childhood Education **4 Credit Hours**

DEP 2100 - Child Growth and Development **3 Credit Hours**

Total Semester Hours: 10

Second Year

Fall Semester

EEC 4613 - Systematic Observation and Assessment **3 Credit Hours**

EEC 1002 - Early Childhood Program Administration **3 Credit Hours**

EEC 1750 - Guidance for Young Children **3 Credit Hours**

EEX 3604 - Classroom Management in Early Childhood Education **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

EEC 4940 - Internship **9 Credit Hours** **Total Semester Hours: 9**
Total Upper Division Program Hours: 60

Elementary Education (BS)

Admission Program Objective Code BSED
State CIP Code 1101312021

The first sixty credits in the following program of study are designed to prepare students not only for the A.A. degree, but also for the General Knowledge exam and Elementary Subject Area exam of the Florida Teacher Certification Exam (FTCE).

If you plan to be an elementary school teacher and are just beginning your A.A. degree, this program of study will best prepare you for that career choice. If you have already completed your A.A. degree and some of your general education courses differ from those listed below, your A.A. degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the FTCE Elementary Subject Area exam. A passing score on the FTCE Elementary Subject Area exam is one of the graduation requirements for this degree. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Courses with the "C" designation include extra hours to accommodate field experiences.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements. Requirements for Teacher Education programs may change due to legislative mandate. Candidates should request the most current requirements from the Teacher Education Program Director.

Lower Division (Associate Degree) Courses

Specific General Education and lower division courses are recommended because these courses meet NWF State College general education requirements and cover state content competencies tested on the Elementary Education K-6 subject area section of the Florida Teacher Certification Exams (FTCE), which all students must pass before entering the final internship semester in the Bachelor of Science in Elementary Education Program.

Unless otherwise specified, select courses from each category; see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶** recommended or other Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- MAC 1105 - College Algebra recommended or other Core Mathematics **3 Credit Hours ♦**
- MGF 1106 - Practical Applications of Mathematics recommended or other General or Core Math **3 Credit Hours ♦**

- BSC_ ____ - General Education Biological Sciences **3 Credit Hours*** (BSC1010C strongly recommended due to FTCE subject area content)
- WOH ____ - World Civilization **3 Credit Hours****
- ECO 2013 - Economics I **3 Credit Hours ♦ ****
- PHY 1020 - Physical Science **3 Credit Hours ♦**
- POS 1041 - American Government **3 Credit Hours ♦ ¶**
- AMH 2010 - American History I **3 Credit Hours ¶ or** AMH 2020 - American History II **3 Credit Hours ♦ ¶**

It is recommended that at least one physical or biological science include a lab.

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

At least 6 hours of diversity credits should be included in General Education required credits.

Total General Education Credits Required: 36

State-Mandated Prerequisite

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

Total State-Mandated Prerequisite Credits Required: 3

Additional Lower Division Coursework

AST ____ - Astronomy **3 Credit Hours**

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and

geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY ____ - Geological Science **4 Credit Hours**

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

Total Additional Lower Division Credits Required: 21

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL

1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000, SYG 2010, WOH 1012, WOH 1022

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Courses

Program Content Courses

EDE 4223 - Integrating Art, Music, and Physical Education

3 Credit Hours
(Summer)

This integrative course provides students with critical understanding of art, music, and physical education. Emphasis is placed on the effective integrative lesson planning and modeling techniques to art, music, and physical education in elementary schools. This course requires a minimum grade of "C".

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4226C - Integrated Language Arts, Social Science and Literature

3 Credit Hours
(Fall, Spring)

This course is designed to prepare candidates to teach language arts and social science in elementary classrooms. Teacher candidates will develop units of study that integrate literature, language arts, with social science content. Emphasis is on constructivist principles and methodology. Teacher candidates will plan and deliver standards-based language arts and social science lessons designed to meet the needs of diverse learners including English language learners (ELLs) and students with exceptionalities. This course requires 18 hours of field experience in a K-6 classroom setting. Current background check (fingerprinting) acceptable to the district in which the field experience will take place is required for this course. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4930C - Seminar in Elementary Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace. Includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 4940 - Internship

9 Credit Hours
(Offered as needed)

Supervised teaching in a public or private school. Student teaching assignments will be made by the department of teacher education field placement coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing with permission of department chair.
EDE 4223, EDE 4226C, EDF 3214, EDF 3430, EDG 3410C, EDG 3343, EEX 3070, LAE 4343C, MAE 3350C, RED 3309C, RED 3511C, RED 4312, RED 4519C, SCE 3350C, TSL 3081C, TSL 4140C

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

LAE 4343C - Writing Across the Curriculum

3 Credit Hours
(Offered as needed)

This course prepares pre-service teachers by developing an understanding of the foundations of writing through the

use of writers workshops and instructional strategies necessary to provide adequate instruction to emergent, novice, and transitional writers. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3309C - Early and Emergent Literacy K-2

3 Credit Hours
(Fall, Spring)

This course is designed to increase the understanding of early literacy development and the conditions which promote total literacy from birth through lower elementary grades. Language theory and current research are used to shape informed practices regarding literacy development. Connections are made among all aspects of literacy learning: reading, writing, listening, speaking and attitude development. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4312 - Integration of Assessment into Classroom Reading

3 Credit Hours
(Summer)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on integrating assessments into the curriculum to strengthen instructional strategies and student success. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): RED 3309C, RED 3511C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4519C - Diagnostic and Instructional Interventions in Reading

3 Credit Hours
(Fall, Spring)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on diagnosis of reading problems, administration of assessments, evaluation of results and planning instructional interventions to remediate reading difficulties. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4854C - Reading Field Experience

2 Credit Hours
(Fall, Spring)

This course provides application of knowledge of reading development to reading instruction. Emphasis is placed on increased reading proficiency for struggling students, including students with disabilities and students from diverse populations. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C, RED 4312, RED 4519C, upper division standing with permission of department chair

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 4140C - ESOL Methods, Curriculum and Assessment

3 Credit Hours
(Fall, Spring)

This course is designed to build on the candidate's knowledge of applied linguistics and cross cultural communication. Candidates will extend their understanding of the role of language and culture in the classroom. This course will prepare candidates for effective planning, instruction, and assessment of ELLs in the classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): TSL 3081C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Elementary Education (BS) (BSED)
First Year
Fall Semester EDG 3343 - Instructional Strategies **3 Credit Hours** EDG 3410C - Classroom Management, School Safety, Law, and Ethics **3 Credit Hours** TSL 3081C - TESOL Issues and Practice **3 Credit Hours**

RED 3309C - Early and Emergent Literacy K-2 **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

EDF 3430 - Measurement, Evaluation, and Assessment in Education **3 Credit Hours**

LAE 4343C - Writing Across the Curriculum **3 Credit Hours**

TSL 4140C - ESOL Methods, Curriculum and Assessment **3 Credit Hours**

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking **3 Credit Hours**

Total Semester Hours: 12

Summer Semester

EDE 4223 - Integrating Art, Music, and Physical Education **3 Credit Hours**

EDF 3214 - Human Development and Learning **3 Credit Hours**

EEX 3070 - Methods of Inclusion and Collaboration **3 Credit Hours**

RED 4312 - Integration of Assessment into Classroom Reading **3 Credit Hours**

Total Semester Hours: 12

Second Year

Fall Semester

EDE 4226C - Integrated Language Arts, Social Science and Literature **3 Credit Hours**

MAE 3350C - Principles and Methods for Teaching Mathematics K-8 **3 Credit Hours**

SCE 3350C - Principles and Methods for Teaching Science K-8 **3 Credit Hours**

RED 4519C - Diagnostic and Instructional Interventions in Reading **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

EDG 4940 - Internship **9 Credit Hours**

EDE 4930C - Seminar in Elementary Education **1 Credit Hour**

RED 4854C - Reading Field Experience **2 Credit Hours**

Total Semester Hours: 12

Total Upper Division Program Hours: 60

Middle Grades General Science (BS)

Admission Program Objective Code BSES
State CIP Code 1101313165

This program will no longer be admitting new students beginning with the 2018-1019 academic year.

The first sixty credits in the following program of study are designed to prepare students not only for the A.A. degree, but also for the General Knowledge exam and Middle Grades General Science Subject Area exam of the Florida Teacher Certification Exam (FTCE).

If you plan to be a middle grades science teacher and are just beginning your A.A. degree, this program of study will best prepare you for that career choice. If you have already completed your A.A. degree and some of your general education courses differ from those listed below, your A.A. degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the FTCE Middle Grades General Science Subject Area exam. A passing score on the FTCE Middle Grades General Science Subject Area exam is one of the graduation requirements for this degree. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Courses with the "C" designation include extra hours to accommodate laboratory and field experiences.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements. Requirements for Teacher Education programs may change due to legislative mandates. Candidates should request the most current requirements from the Teacher Education Program Director.

Lower Division (Associate Degree) Courses

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

Students must have a two-course science sequence (BSC 1010C and BSC 1011C, or CHM, or PHY) with lab for admission into the Middle Grades General Science Program. If a student has a PHY or CHM sequence, then he or she must take a biological science course to satisfy college General Education requirements.

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- ___ ___ - Core Mathematics **3 Credit Hours ♦**
- ___ ___ - General or Core Mathematics **3 Credit Hours ♦**
- BSC 1010C - Principles of Biology I **(recommended) 4 Credit Hours***
- GLY ___C - Geological Sciences **4 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****

- ____ ____ - Behavioral Social Sciences **3 Credit Hours****
- BSC 1011C - Principles of Biology II **4 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group; GLYs are core physical science general education courses; BSC 1010C and BSC 1011C are core biological general education science courses. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

State-Mandated Prerequisites and Lower Division Coursework

Students must have a two-course science sequence (BSC 1010C and BSC 1011C, CHM, or PHY) with lab for admission into the Middle Grades General Science Program. If a student has a PHY or CHM sequence, then he or she must take a biological science course to satisfy college General Education requirements. Additionally, in order to master the state competencies in Middle Grades General Science and thus pass the Florida Teacher Certification Exam in the subject area, the College strongly recommends that students with PHY or CHM sequences also take BSC 1010C and 1011C.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

GLY ____C - Geological Science 4 Credit Hours (to be satisfied in General Education requirements)
OCE ____C - Oceanographic Science 4 Credit Hours
Two-course science sequence with lab [BSC 1010C and BSC 1011C (to be satisfied in general education requirements), CHM, or PHY] 8 Credit Hours. BSC 1010C and BSC 1011C strongly recommended. Please note: BSC 1085C and BSC 1086C do not meet the state mandated lab sequence requirement.

Additional Lower Division Coursework

- CHM 1020 or PHY 1020 **4 Credit Hours (prerequisite for upper division ISC 4145)**
- AST 1002 - Descriptive Astronomy **3 Credit Hours ♦**
- ___ ___ Course with diversity focus **3 Credit Hours** (see list below)
- ___ ___ Elective **2 Credit Hours**

Total Lower Division Additional Credits Including State Mandated Prerequisites Required: 24

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000, SYG 2010, WOH 1012, WOH 1022

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Courses

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

EVR 3949 - Extended Internship, Environmental Science

4 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum Grade of "B" in any college-level science course and permission of instructor.

ISC 4145 - Environmental Systems

3 Credit Hours
(Offered as needed)

Environmental Systems will expose students to a broad overview of the structure and processes occurring on Earth. Students will gain a broad understanding of the interactions between the atmosphere, biosphere, lithosphere, and hydrosphere. Course topics will be related to current environmental issues and our local ecosystems. This course is focused on Earth System Science content with development of methods specific to teaching middle school science as a secondary objective.

Prerequisite(s): (1) any two-course laboratory sequence in the natural sciences (i.e., Principles of Biology I & II, Principles of Geology I & II, College Chemistry I & II, Physics I & II, College Physics I & II, Anatomy & Physiology I & II); (2) any GLY course; (3) and either CHM1020 (Chemical Science) or PHY1020 (Physical Science).

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4930C - Seminar in Science Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in science, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching science in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4945 - Internship - Middle Grades Science

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Science in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430, EDG 3343, EDG 3410C, EME 3410C, EEX 3070, ESC 1000, EVR 3949, ISC 4145, MET 1010C, RED 3324C, RED 3335C, SCE 3350C, SCE 4940C, TSL 3081C, and CHM 1020 or PHY 1020

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

OR

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Middle Grade Science (BS) (BSES)
First Year
Fall Semester EDG 3343 - Instructional Strategies **3 Credit Hours** EDG 3410C - Classroom Management, School Safety, Law, and Ethics **3 Credit Hours** TSL 3081C - TESOL Issues and Practice **3 Credit Hours** RED 3324C - Teaching in the Middle Grades Curriculum **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester

EME 3410C - Integrating Technology in the Classroom **3 Credit Hours**

EDF 3430 - Measurement, Evaluation, and Assessment in Education **3 Credit Hours**

EVR 3949 - Extended Internship, Environmental Science **4 Credit Hours**

ESC 1000 - Earth Science **3 Credit Hours ♦**

Total Semester Hours: 14

Summer Semester

EDF 3214 - Human Development and Learning **3 Credit Hours**

CHM 1020 - Chemical Science **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦**

EEX 3070 - Methods of Inclusion and Collaboration **3 Credit Hours**

MET 1010C - Introduction to Meteorology **4 Credit Hours**

Total Semester Hours: 14

Second Year

Fall Semester

SCE 3350C - Principles and Methods for Teaching Science K-8 **3 Credit Hours**

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience **1 Credit Hour**

ISC 4145 - Environmental Systems **3 Credit Hours**

RED 3335C - Teaching Reading in the Content Areas **3 Credit Hours**

Total Semester Hours: 10

Spring Semester

SCE 4945 - Internship - Middle Grades Science **9 Credit Hours**

SCE 4930C - Seminar in Science Education **1 Credit Hour**

Total Semester Hours: 10

Total Upper Division Program Hours: 60

Middle Grades Mathematics (BS)

Admission Program Objective Code BSEM
State CIP Code 1101313112

This program will no longer be admitting new students beginning with the 2018-1019 academic year.

The first sixty credits in the following program of study are designed to prepare students not only for the A.A. degree, but also for the General Knowledge exam and Middle Grades Math Subject Area exam of the Florida Teacher Certification Exam (FTCE).

If you plan to be a middle grades math teacher and are just beginning your A.A. degree, this program of study will best prepare you for that career choice. If you have already completed your A.A. degree and some of your general education courses differ from those listed below, your A.A. degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the FTCE Middle Grades Math Subject Area exam. A passing score on the FTCE Middle Grades Mathematics Subject Area exam is one of the graduation requirements for this degree. For a detailed summary of graduation requirements for this degree program, see the Bachelor of Science graduation requirement section.

Courses with the "C" designation include extra hours to accommodate laboratory and field experiences.

Substitutions for any coursework in this program of study must be approved by the Teacher Education Program Director. Please note that some courses below may require lower division prerequisites not specified as program requirements. Requirements for Teacher Education programs may change due to legislative mandates. Candidates should request the most current requirements from the Teacher Education Program Director.

Lower Division (Associate Degree) Courses

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- ENC 1102 - English Composition II **3 Credit Hours ¶**
- HUM 1020 - Humanities – Introduction **3 Credit Hours ❖ † ♦ ¶**
- _____ _____ - General or Core Humanities **3 Credit Hours**
- MAC 1105 - College Algebra recommended or other Core Math **3 Credit Hours ♦**
- MAC 1140 - Pre-Calculus Algebra recommended or other General or Core Math **3 Credit Hours ♦**
- _____ _____ - General Education Biological Sciences **3 Credit Hours***
- _____ _____ - General Education Physical Sciences **3 Credit Hours***
- _____ _____ - History/Government Social Sciences **3 Credit Hours****
- _____ _____ - Behavioral Social Sciences **3 Credit Hours****
- _____ _____ - Additional General Education Credits **6 Credit Hours**

***** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

****** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

At least 6 hours of diversity credits should be included in General Education required credits.

Total General Education Credits Required: 36

State-Mandated Prerequisites

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- MAC ____ - Approved Mathematics Course(s) **4 Credit Hours** (To be satisfied in General Education Requirements by MAC 1105 - College Algebra and MAC 1140 - Pre-Calculus Algebra)

Additional Lower Division Coursework

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites. Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

___ ____ - Course with diversity focus **3 Credit Hours** (See list below)

Choose 8 additional elective credits

___ ____ - Elective
___ ____ - Elective
___ ____ - Elective
___ ____ - Elective

Additional Lower Division Credits Required Including State Mandated Prerequisites: 24

Diversity Requirement

Within the AA or AS coursework, students must meet the state-mandated diversity requirement of 6 credit hours with an international or diversity focus.

Diversity courses: ANT 2000, ANT 2100, ARH 1000, ARH 2050, ARH 2051, ARH 2060, ARH 2402, ASL 1140, ASL 1150, ASL 2160, CHI 1120, CHI 1121, EEX 2010, FRE 1120, FRE 1121, GEA 1000, HUM 1020, HUM 2250, HUM 2700, IDS 2220, LIT 2090, LIT 2100, LIT 2120, LIT 2335, LIT 2603, PHI 2010, PHI 2600, POT 1002, REL 2300, SPN 1120, SPN 1121, SPN 2220, SPN 2221, SYG 2000, SYG 2010, WOH 1012, WOH 1022

Total Lower Division (Associate Degree) Credits Required: 60

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

Upper Division Courses

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

MAD 3107 - Applied Discrete Mathematics

3 Credit Hours
(Fall)

This course builds on the foundation established in Introduction to Discrete Mathematics with further exploration in logic, mathematical reasoning, and mathematical proof writing. Topics include logic, set theory, boolean algebra, combinatorics, and graph theory with applications.

Prerequisite(s): Completion of MAC 2312 with a grade of “C” or better or concurrent enrollment in MAC 2312.

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4312C - How Children Learn Math

3 Credit Hours
(Offered as needed)

This course is designed to develop the skills and concepts necessary to deliver the mathematics curriculum effectively in the classroom. The content strongly reflects the curriculum emphases of the National Council of Teacher of Mathematics, and topics are presented using a process-oriented approach. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4930C - Seminar in Math Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in mathematics, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4940C - Teaching Methods in Middle Grades Math Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4945 - Internship - Middle Grades Math

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Math in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430 , EDG 3410C, EDG 3343, EEX 3070, EME 3410C, MAC 2312, MAD 3107, MAE 3350C , MAE 4312C, MAE 4940C , MHF 4404, MTG 2206, RED 3324C, RED 3335C, STA 2023, and TSL 3081C

MAT 2905 - Applied Teaching Techniques for Mathematics

4 Credit Hours
(Summer)

The goals of this course are: refinement or acquisition of mathematics skills and connections between mathematics topics needed for successfully tutoring in an academic setting; acquisition of general methods of tutoring as well as specific tutoring techniques needed for specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. Prerequisite: Consent of the department. A minimum grade of "C" is required.

Prerequisite(s): Admission to the BS Middle Grades Math degree program

MHF 4404 - History of Mathematics

3 Credit Hours
(Offered as needed)

This course is for students pursuing an education degree with an emphasis in middle school and secondary mathematics. This course covers the evolution of mathematics from early number systems through modern mathematics. If used to meet NWFSC Teacher Education program requirements, this course requires a grade of "C" or better.

Prerequisite(s): Completion of MAC 2311 with a grade of "C" or better or concurrent enrollment in MAC 2311.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

Total Upper Division Credits Required: 60

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Middle Grades Mathematics (BS) (BSEM)
First Year
Fall Semester EDG 3343 - Instructional Strategies **3 Credit Hours** EDG 3410C - Classroom Management, School Safety, Law, and Ethics **3 Credit Hours** TSL 3081C - TESOL Issues and Practice **3 Credit Hours** RED 3324C - Teaching in the Middle Grades Curriculum **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester RED 3335C EME 3410C - Integrating Technology in the Classroom **3 Credit Hours** MTG 2206 - College Geometry **3 Credit Hours** EDF 3430 - Measurement, Evaluation, and Assessment in Education **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester EDF 3214 - Human Development and Learning **3 Credit Hours** STA 2023 - Statistics **3 Credit Hours ♦** MAT 2905 - Applied Teaching Techniques for Mathematics **4 Credit Hours** EEX 3070 - Methods of Inclusion and Collaboration **3 Credit Hours**

Total Semester Hours: 13
Second Year
Fall Semester MAE 3350C - Principles and Methods for Teaching Mathematics K-8 **3 Credit Hours** MAE 4940C - Teaching Methods in Middle Grades Math Field Experience **1 Credit Hour** MHF 4404 - History of Mathematics **3 Credit Hours** MAD 3107 - Applied Discrete Mathematics **3 Credit Hours** MAE 4312C - How Children Learn Math **3 Credit Hours** **Total Semester Hours: 13**
Spring Semester MAE 4945 - Internship - Middle Grades Math **9 Credit Hours** MAE 4930C - Seminar in Math Education **1 Credit Hour** **Total Semester Hours: 10**
Total Upper Division Program Hours: 60

Bachelor of Science (BS) Degree in Nursing

BS in Nursing Degree

The baccalaureate nursing program at NWF State College is accredited by the Commission on Collegiate Nursing Education, One DuPont Circle, NW, Suite 530, Washington DC 20036, (202) 887-6791. For more information regarding disclosure, please review pages 15-16 of the CCNE Procedures for Accreditation of Baccalaureate and Graduate Degree Nursing Programs (http://www.aacn.nche.edu/ccne-accreditation/Procedures.pdf). The program is an R.N. to BSN degree career ladder and is open to applicants who currently hold a valid Registered Nursing license and have completed an ADN or diploma program. The program can be completed in three to four semesters. Program content for the BSN program meets those specified in Florida's A.S. to B.S. Articulation Manual. All theory courses are taught on-line from the NWF State College Niceville Campus and clinical instruction targets the specific needs of Okaloosa and Walton healthcare providers.

Graduation Requirements for the BS in Nursing Degree

Students seeking the Bachelor of Science degree in Nursing (BSN) must meet the following requirements:

- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.

- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Earn a minimum grade ("C") in all upper division course work.
- Complete A.A. General Education requirements, including all Gordon Rule course requirements with minimum grades ("C").
- Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
- Complete at least 50% of the upper division program course work (not to include portfolio assessment) in residence at NWF State College.
- Complete a minimum of one hundred and twenty (120) college credits applicable toward the BSN degree.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Bachelor of Science

Nursing (BS)

Admission Program Objective Code BSNG
State CIP Code 1105138012

The baccalaureate Nursing program at Northwest Florida State College is accredited by the Commission on Collegiate Nursing Education, One DuPont Circle, NW, Suite 530, Washington DC 20036, (202)887-6791. For more information regarding disclosure, please review pages 15-16 of the CCNE Procedures for Accreditation of Baccalaureate and Graduate Degree Nursing Programs (http://www.aacn.nche.edu/ccne-accreditation/Procedures.pdf).

The program is an R.N. to B.S.N. degree career ladder and is open to applicants who currently hold a valid Registered Nursing license and have completed an ADN or diploma program. The program can be completed in three to four semesters. Program content for the B.S.N. program meets those specified in Florida's A.S. to B.S. Articulation Manual. All theory courses are taught on-line from the NWF State College Niceville campus and clinical activities can be completed near the student's residence.

Lower Division Courses

Unless otherwise specified, select courses from each category, see the AA Degree General Education Requirements section of catalog for course listings:

General Education Course Requirements

(To include GE courses that are required B.S.N. Common Prerequisites)

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ - General Education Math **3 Credit Hours**

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ____ ____ - General Education Humanities (SATC) **6 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- ____ ____ - General Education Physical Science **4 Credit Hours**

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- ____ ____ - GE Social Science/History/Government **3 Credit Hours**

Total General Education Credits: 36

B.S.N. Common Prerequisite Courses

(Additional Common Prerequisites to those listed above under GE)

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

- ____ ____ CHM, BSC, BCH, PCB, PHY Course (CHM, PHY may be used for GE if 4 hours) **3 Credit Hours**

Total Common Prerequisite Courses: 13

Foreign Language

Credits must be earned in the same foreign language; the requirement may also be satisfied with two years of the same high school foreign language or appropriate score on an approved CLEP examination.

Total Foreign Language Credits: 8

Lower Division Nursing and Other Courses

Generally, these are the NUR courses required in the associate degree nursing program; credits may vary depending on how many additional non-NUR credits are needed to meet associate degree requirements.

Total Lower Division Nursing and Other Courses: 10-44

Total Lower Division Credits: 76

Lower division credits may differ from this number depending on whether or not the student must complete additional prerequisites or foreign language credits.

Upper Division Courses

Core Courses

NUR 3080 - Dimensions of Baccalaureate Nursing Practice

3 Credit Hours
(Fall, Summer)

This course will provide Registered Nurses, who are returning to school to earn a Baccalaureate degree, an opportunity to advance professional practice concepts. As designed, the course engages the student intellectually in an ongoing professional dialogue and journey with peers, colleagues, and instructors that serves to broaden the student's professional development and builds on preexisting knowledge and experiences. The course curriculum is written for adult learners with the characteristics of self-direction, prior experience, applicability to practice, and motivation to meet the challenge to expand their knowledge base and to utilize advanced critical thinking skills.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3955 - Portfolio I

1 Credit Hour
(Fall, Summer)

This course will provide RN to BSN students an opportunity to develop an electronic professional portfolio to express one's professional nursing expertise and proficiency.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3067C - Health Assessment

3 Credit Hours
(Fall, Summer)

This course is designed to develop the student's knowledge for obtaining and recording a systematic, comprehensive health history, psychosocial assessment, and physical examination of the adult. The course involves the synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as they apply to the findings obtained in the comprehensive health assessment of clients of various ages. During the fieldwork experience, emphasis will be placed on collection of a database through physical assessment, history taking and interviewing.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3071 - Writing for Success in Nursing

1 Credit Hour
(Fall, Spring, Summer)

This course Is designed to develop the student's knowledge for writing at the upper division nursing level. The course includes information regarding use of APA format and scholarly writing resources.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research

3 Credit Hours
(Fall, Spring)

This course is designed to provide the RN to BSN student with an introduction to the research process and evidence based practice. The purpose of the course is to stimulate interest in nursing research; to enable students to understand and judge the usefulness of scientific findings; and to develop an understanding of how clinical proficiency is combined with experimental proof to produce nursing practices based upon evidence. An on-line teaching method is used with optional workshops available to students.

Prerequisite(s): STA 2023.

NUR 4615C - Family and Community Health

5 Credit Hours
(Fall, Spring)

The Family and Community Health Nursing course is designed to facilitate the conceptualizing of family, population groups, and community as units of care from diverse cultures, ethnic, and social backgrounds. The student is provided a fieldwork opportunity to assess the health needs of selected families and groups in the community setting with selected health promotion, risk reduction, and disease prevention. The nursing process is used to examine multiple influences impacting life-course experiences of families and communities to enhance functioning.

Prerequisite(s): NUR 3067C, NUR 3080, admission to the BSN program and completion of all General Education requirements.

NUR 4827C - Nursing Leadership and Management

5 Credit Hours
(Spring, Summer)

This course provides students with an evidence-based study of leadership, collaboration, and coordination in healthcare settings. Students develop an evidence based paper to deal with key leadership and management issues related to professional goals. Nursing leadership and management fieldwork focuses on the roles and functions of the professional nurse in these roles. Issues associated with healthcare delivery are explored. Fieldwork provides an opportunity to plan, implement and evaluate a change in the practice of nursing.

Prerequisite(s): NUR 3080,NUR 4165, NUR 3067C, NUR 4615C.

NUR 4956 - Portfolio II

1 Credit Hour
(Spring, Summer)

This course will provide students an opportunity to complete and evaluate their electronic professional portfolio to express their professional nursing expertise and proficiency.

Prerequisite(s): NUR 3955, NUR 3080; Pre or Corequisite: NUR 4827C.

- NUR ____ - Upper Division Nursing Elective (See Below) **3 Credit Hours**

NUR 3837 - Health Care Issues

2 Credit Hours
(Fall, Spring)

This course provides a forum for the exploration and evaluation of concerns germane to contemporary nursing. The

focus of this course is on the nursing profession and current major issues and problems that concern it. Social forces influencing changes in the nursing profession are analyzed in terms of historical antecedents and their current manifestations. Recently passed, and pending legislature at both the national and state levels is emphasized.

Prerequisite(s): Current RN Licensure.

NUR 4125 - Clinical Pathophysiology

3 Credit Hours
(Fall, Spring)

This course examines in detail the underlying process involved in the development, evolution, manifestations, and complications of common clinical diseases across the life span, and compares normal and abnormal states. The biological bases for therapeutic clinical actions are examined.

Prerequisite(s): NUR 3067C

Total Upper Division Nursing Credits: 30

Upper Division Nursing Electives

NUR 3678 - Nursing Care of Vulnerable Populations

3 Credit Hours
(Offered as needed)

Caring for the vulnerable members of society is a function nurses perform without regard for their own ambitions, personal safety, and financial security. This course is designed to pull together material from different cultures and at risk groups of individuals considered vulnerable populations. Key concepts will be discussed that will provide a basic structure for caring for the vulnerable, the relevance of nursing theories to vulnerable populations, nursing research showing the kinds of phenomena nurses study, and many ideas about learning to work with and advocate for vulnerable individuals.

NUR 3826 - Nursing Ethics

3 Credit Hours
(Offered as needed)

This course provides an in-depth exploration of ethical principles and moral reasoning as the foundation of nursing practice. The ANA Code of Ethics will be used as a framework for examining current issues in healthcare delivery across the age span from reproductive issues to end-of-life care.

Prerequisite(s): Must be an RN or ASN student.

NSP 4275 - Introduction to Critical Care Nursing

3 Credit Hours
(Offered as Needed)

This course examines the needs of the critically ill client. As part of the human experience, the integrity of the individual and family may be disrupted by a critical illness. During such time, the critical care nurse assists the individual and family to restore life processes to a state of dynamic equilibrium. This course emphasizes the

involvement through use of scientific rationale and application of the nursing process in providing care to the individual client and family. Critical care concepts and skills for promoting client and family well-being are stressed.

NSP 4869 - The Professional Nurse Manager and Leader

3 Credit Hours
(Offered as needed)

This course outlines the roles and functions of nurses in executive practice using the competencies identified by the American Organization of Nurse Executives (AONE). Successful nurse leaders and managers exercise complex leadership responsibilities that directly affect the quality of patient and family care in today's multifaceted healthcare management systems. This course will address competencies in communication, knowledge of the healthcare environment, business skills and principles, and professionalism. The course content also provides a review of the material covered in the Certified Nurse Manager and Leader examination conducted by the American Organization of Nurse Executives Credentialing Center that is available to BSN prepared Registered Nurses.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NSP 3640 - Nursing Care of Military and Veteran Populations

3 Credit Hours
(Spring)

This course is designed to identify the unique healthcare needs of military and veteran populations in the United States in order to prepare students and practicing nurses to develop competence in designing nursing interventions within civilian and government agencies in which military members and veterans seek healthcare. In accordance with the ANA's pledge (2012) to raise awareness of the unique conditions and needs of military veterans and their families, this course supports the Joining Forces initiative to further nursing training to include specialized topics such as traumatic brain injury, posttraumatic stress disorder, trauma rehabilitation, and understanding the military and veteran's healthcare delivery system.

SPN 3036 - Spanish for Health Care Providers

3 Credit Hours
(Offered as needed)

Spanish for Health Care Providers is designed for individuals majoring in nursing or working in health-related areas. The course focuses on vocabulary needed for the healthcare workplace, with grammar taught as a task-based practical skill. Students will learn phrases used to complete health assessments which include conducting interviews, filling out forms, writing reports, and reading and understanding medical articles and brochures. Prevalent disease processes will be discussed as well as cultural practices that affect health care, specifically the health care of Spanish-speaking patients. This course does not fulfill any part of the Florida state language requirements.

Portfolio

Credits are awarded after successful completion of the Portfolio I and II courses

Total Portfolio Credits: 14

Total Upper Division Credits: 44

Total Program Credits Required: 120

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Nursing (BS) (BSNG)
First Year
Fall Semester NUR 3955 - Portfolio I **1 Credit Hour** NUR 3071 - Writing for Success in Nursing **1 Credit Hour** NUR 3080 - Dimensions of Baccalaureate Nursing Practice **3 Credit Hours** NUR 3067C - Health Assessment **3 Credit Hours** ENC 1102 - English Composition II **3 Credit Hours ¶** **Total Semester Hours: 11**
Spring Semester NUR 4125 - Clinical Pathophysiology **3 Credit Hours** NUR 3837 - Health Care Issues **2 Credit Hours** General Education Humanities Course **3 Credit Hours** General Education Social Science History/Government Course **3 Credit Hours** **Total Semester Hours: 11**
Summer Semester General Education Physical Science Course (CHM or PHY) **4 Credit Hours** STA 2023 - Statistics **3 Credit Hours ♦** Foreign Language I **4 Credit Hours** **Total Semester Hours: 11**
Second Year

Fall Semester NUR 4615C - Family and Community Health **5 Credit Hours** NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research **3 Credit Hours** Foreign Language II **4 Credit Hours** **Total Semester Hours: 12**
Spring Semester NUR 4827C - Nursing Leadership and Management **5 Credit Hours** BSN Nursing Elective **3 Credit Hours** NUR 4956 - Portfolio II **1 Credit Hour** **Total Semester Hours: 9**
Portfolio credits are awarded after successful completion of NUR 4827C and NUR 4956 **14 Credit Hours** **Total Portfolio Credits: 14**
Total Upper Division Program Hours: 68

AA Degree

- AA Degree Program Requirements
- AA Degree General Education Requirements
- AA Degree Graduation Requirements
- AA Transfer Majors
- AA Major Fields of Interest
- Transferring to a Four-Year Institution in Florida
- Foreign Language Requirements for Universities
- Student Bill of Rights

Associate in Arts Degree

The Associate in Arts degree is equivalent to the first two years of a bachelor's degree program and is offered for those students planning to transfer to a four-year institution or to remain at NWF State College to complete the last two years of a bachelor's degree program. The AA degree is awarded upon satisfactory completion of 60 credit hours of general education and college credit electives, attainment of the appropriate minimum grade point averages, and completion of all other applicable college graduation requirements, including the Speaking-Across-the-Curriculum and Technology-Across-the-Curriculum requirements. Although the number of credits and specific courses required for a bachelor's degree may vary across upper-division schools, the Florida community colleges and universities enjoy an articulation agreement, which guarantees certain transfer rights for students who complete the AA degree.

A.A. degree students should work closely with an Academic Advisor or faculty advisor to select the appropriate courses to meet their degree goals.

Graduation Requirements for the AA Degree

The A.A. degree curriculum requires the following.

- Complete a minimum of 60 college credits per the following distribution as outlined in the AA Degree General Education Requirements:
    - Complete 36 credit hours of general education courses distributed appropriately across the Communications, Humanities, Social Sciences, Mathematics, Natural Sciences, and General Education Elective categories presented in the AA Degree General Education Requirements section of the catalog for specific courses.
    - Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
    - Complete 24 credit hours of college credit electives. (Students should consult with a counselor or advisor to select the electives most appropriate to their intended baccalaureate program.)
- Meet the Gordon Rule (FAC Rule 6A-10.030) minimum grade and writing requirements:
    - Attain a grade of "C" or higher in each Gordon Rule writing course (any general education course from the Communications or Humanities categories, and those designated as Gordon Rule in the Social Science category) whether credits in such courses are earned at NWF State College or elsewhere.
    - Complete the Gordon Rule writing requirement (students who complete 6 credits each from the Communications and Humanities categories and an additional Gordon Rule Social Science course will satisfy this requirement).

    - Attain a grade of "C" or higher in each Gordon Rule Mathematics course (any course from the Mathematics category that is used to meet AA general education requirements), whether credits in such courses are earned at NWF State College or elsewhere.
- Meet the Civic Literacy Competency (FAC Rule 6A-10.02413). All first-time-in college students beginning in the 2018-19 academic year must demonstrate civic literacy competency prior to graduation either through successful completion (with a grade of "C" or higher) of POS 1041 or AMH 2020 or by achieving a passing score on an assessment.

Assessment	Standard Score
AP Government and Politics: United States	3
AP United States History	4
CLEP: American Government	50

- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWFSC.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Transferring to another Four-Year College or University within the State of Florida:

Faculty members, counselors and advisors will gladly assist students in achieving a smooth transfer to other institutions in Florida. Liaison representatives from the respective public institutions in the state are eager to help. Several of the liaisons make regular visits to campus and will meet directly with students to answer questions. The names of the liaisons and dates of upcoming visits are available in the Advising Center in the Student Services Center on the Niceville Campus. In addition, Common Prerequisite Manuals for the Florida State University System are available on RaiderNet or at www.flvc.org.

It is desirable that students transferring to a senior institution plan their program so that common prerequisites can be completed for the upper-division transfer school for their major. It is best for the student to complete the entire two-year degree program prior to transfer, as A.A. graduates who transfer to one of the institutions in the Florida State University System (SUS) enjoy certain protections under the statewide articulation agreement. These rights are presented in the "Student Bill of Rights".

NWF State College offers the necessary prerequisites for most of the State of Florida University Baccalaureate Programs. Students are encouraged to consult a current catalog from the upper-division school where they plan to transfer in addition to meeting with a college advisor or faculty member to acquire an official program plan of study for their intended major.

Special Foreign Language Requirements for Entry into Upper-Level Florida Universities:

Effective August 1, 1990, according to requirements of the Florida Board of Regents, new applicants to any of the state universities must have completed two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination. There are two exceptions to this requirement: 1) students who received an A.A. degree prior to September 1, 1989, or 2) students who enrolled in a program leading to an A.A. degree prior to August 1, 1989 and maintained continuous enrollment. Students who are not exempt but fail to satisfy the requirement, may be admitted to the university as part of the 5% admissions exceptions group but will be required to complete eight-ten credit hours in one foreign language as a graduation requirement, regardless of the requirements in the student's major. Students transferring into the Florida SUS without an A.A. degree or fewer than 60 transferable credits must meet this foreign language requirement before going on to the upper division. NWF State College offers the necessary coursework in French, Spanish, Chinese and American Sign Language (ASL) to meet the Florida SUS admission requirements.

Student Bill of Rights

Florida Community College Associate in Arts (AA) Degree graduates are guaranteed rights under the Statewide Articulation Agreement (State Board of Education Rule 6A-10.024).

AA Transfer Majors

AA Transfer Majors indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

The following list indicates the AA transfer majors that can be completed taking courses at NWF State College. It is not a complete list of all university transfer majors. The Common Course Prerequisite Manual lists all university transfer programs available in the State of Florida.

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWF **State College** *recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.*

AA - Associate in Arts General Degree

Admission Program Objective Code AAGD
State CIP Code 1192401010

The AA is primarily intended as a transfer degree for students continuing to a 4 year bachelor's program at a university or state college. The AA Transfer Programs indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed.

Associate in Arts students must complete 60 college credits to complete the degree; 36 of these credits must be general education credits distributed across five subject area categories. A student must satisfy the required number of credits in each category. The remaining 24 elective credits should be selected in consultation with an advisor, who will assist with selecting the college credits most advantageous to the student's educational goals.

General Education

In consultation with an advisor, choose appropriate General Education courses that fulfill your AA Degree Concentration for University Transfer Major. Select courses from each area as listed below; see the AA Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Communication Skills **3 Credit Hours**

- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- ____ ____ - Core Mathematics **3 Credit Hours**
- ____ ____ - General or Core Mathematics **3 Credit Hours**
- ____ ____ - Biological Sciences **3 Credit Hours****
- ____ ____ - Physical Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours*****
- ____ ____ - History/Government Social Sciences **3 Credit Hours*****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

**** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

***** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

AA Elective Requirements

In consultation with an advisor, select appropriate AA degree college credit electives that fulfull your AA Degree Concentration for University Transfer Major:

- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**

Total Elective Credits Required: 24

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

AA General Degree (AA) (AAGD)

First Year

Fall Semester

Core Mathematics **- 3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Core Humanities **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Core or General Mathematics **- 3 Credit Hours**

ENC 1102 - English Composition II **3 Credit Hours ¶**

Core or General Humanities **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

Biological Science* **- 4 Credit Hours**

Behavioral Social Science** **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 16

Spring Semester

Physical Science* **- 4 Credit Hours**

History/Government Social Science** **- 3 Credit Hours** Elective or Additional General Education Hours*** **- 4 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 60
* At least one Science course must come from the core. ** At least one Social Science course must come from the core. *** Students who have already satisfied the 36 hour General Education requirement may take a general Elective.

AA Degree Checklist:

- Have you completed a minimum of 60 credit hours in the following areas?
    - 36 Hours of General Education
        - 6 hours in Communications ("C" or better)
        - 6 hours in Mathematics ("C" or better)
        - 6 hours in Humanities ("C" or better)
        - 8 hours in Natural Science
        - 6 hours in Social Sciences ("C" or better in History/Government Social Science category)
        - 4 hours in Additional General Education Credits (if needed)
    - 24 hours of college credit A.A. transferable electives
- Have you completed at least 15 of the 60 credits at NWF State College?
- Have you completed the foreign language requirement?
- Have you met the minimum 2.0 GPA requirements for the A.A.?
- Have you met the Civic Literacy Competency requirement for the A.A?
- Have you applied for graduation by the advertised deadline?

AA Transfer Major: Accounting

Admission Program Objective Code: ACCO
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, IRSC, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520301
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Actuarial Science

Admission Program Objective Code: ACTU
State CIP Code: 1192401010

Offered at FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Advertising

Admission Program Objective Code: ADVE
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090903
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Aerospace Engineering

Admission Program Objective Code: AERO
State CIP Code: 1192401010

Offered at UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: African-American (Black) Studies

Admission Program Objective Code: AFRI
State CIP Code: 1192401010

Offered at FAMU, FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Agricultural (Food & Resource) Economics

Admission Program Objective Code: AGRI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Agricultural Engineering

Admission Program Objective Code: AGRE
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Agricultural Teacher Education (Vocational)

Admission Program Objective Code: AGTE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Agriculture Science

Admission Program Objective Code: AGRS
State CIP Code: 1192401010

Offered at UFAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: American Studies (USA)

Admission Program Objective Code: AMER
State CIP Code: 1192401010

Offered at FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050102
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Anthropology

Admission Program Objective Code: ANTH
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Classes

- ANTXXXX - Any course with ANT prefix
- ANTXXXX - Any course with ANT prefix

AA Transfer Major: Applied Physiology and Kinesiology

Admission Program Objective Code: APPK
State CIP Code: 1192401010

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Offered at FSU, UF
Transfer Program CIP code: 260908
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the

individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Applied Science

Admission Program Objective Code: APPL
State CIP Code: 1192401010

Offered at FGCU, UCF, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Majors Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Architecture - FAMU/NWF Pre-Articulation Agreement

Admission Program Objective Code FAMU
State CIP Code 1192401010

Articulation Agreement with the Florida A&M University (FAMU) School of Architecture:

An articulation agreement between NWF State College and Florida A&M University (FAMU) School of Architecture allows students to earn an Associate in Arts (A.A.) degree that could qualify them for entrance to the upper-division of the Bachelor of Science in Architectural Studies degree program at FAMU. It is highly recommended that, in addition to the common prerequisites listed below, students should consult the current catalog from FAMU. Some SUS programs have restricted access or are considered Limited Access programs. Students are responsible for completing the specific requirements for admissions. For more information on the FAMU A.A. to B.S. articulation, contact Mr. Ray Rickman at 729-5218 or rickmanr@nwfsc.edu.

Associate in Arts Degree/Pre-Architecture FAMU Prerequisites

Please consult the Course Description section of the catalog for the required prerequisites of all courses needed to satisfy the requirements of this program. Students must meet NWFSC A.A. degree graduation requirements.

General Education

Undesignated courses are to be selected from the General Education Requirements listed in the AA Degree General Education Requirements section of catalog for specific courses.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

Total General Education Credits Required: 36

Program Electives

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an

articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with

Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

Total Program Elective Credits Required: 36

Total Articulation Program Credits Required: 72

AA Transfer Major: Art History & Appreciation

Admission Program Objective Code: ARTA
State CIP Code: 1192401010

Offered at FIU, FSU, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500703
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- XXXXXXX - Competency requirement for a single foreign language*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Art Teacher Education

Admission Program Objective Code: ARTT
State CIP Code: 1192401010

Offered at FIU, UCF, UF*, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131302
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Art, General

Admission Program Objective Code: ART
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, UCF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing

problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.
or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARHXXX - Any course with ARH prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Asian Studies

Admission Program Objective Code: ASIA
State CIP Code: 1192401010

Offered at FIU, FSU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Astronomy

Admission Program Objective Code: ASTR
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Athletic Training

Admission Program Objective Code: ATHL
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510913
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Behavioral Healthcare

Admission Program Objective Code: BEHA
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biochemistry

Admission Program Objective Code: BICY
State CIP Code: 1192401010

Offered at FGCU, FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences - Interdisciplinary Natural Sciences

Admission Program Objective Code: BIOP
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 16/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Chemistry

Admission Program Objective Code: BICH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 1/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of

ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Computer Science

Admission Program Objective Code: BICO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 2/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the

concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Earth Science

Admission Program Objective Code: BIEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 3/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Mathematics

Admission Program Objective Code: BIMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 4/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Physics

Admission Program Objective Code: BIPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 5/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of

ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Computer Science

Admission Program Objective Code: CHCO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 6/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Earth Science

Admission Program Objective Code: CHEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 7/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Mathematics

Admission Program Objective Code: CHMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 8/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Physics

Admission Program Objective Code: CHPY
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 9/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer & Earth Sciences

Admission Program Objective Code: CMEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 10/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Math

Admission Program Objective Code: CMMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 11/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric

substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Physics

Admission Program Objective Code: CMPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 12/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Mathematics

Admission Program Objective Code: EAMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 13/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Physics

Admission Program Objective Code: EAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 14/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Mathematics & Physics

Admission Program Objective Code: MAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 15/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological/Biosystems Engineering

Admission Program Objective Code: BIBI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 144501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Biology, General

Admission Program Objective Code: BIOL
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, MDC, SPC, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biology, General - FSU - Teach

Admission Program Objective Code: BIOF
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular

growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic

compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biomedical Sciences

Admission Program Objective Code: BIMD
State CIP Code: 1192401010

Offered at FSCJ, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory

components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biomedical/Bioengineering

Admission Program Objective Code: BIEN
State CIP Code: 1192401010

Offered at FIU, FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biotechnology

Admission Program Objective Code: BITC
State CIP Code: 1192401010

Offered at FGSU, SFC, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Botany, General

Admission Program Objective Code: BOTA
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the

concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Business Administration

Admission Program Objective Code: BUSA
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business Administration & Management

Admission Program Objective Code: BUSM
State CIP Code: 1192401010

Offered at CC, FAMU, FAU, FGCU, FIU*, FSCJ, FSU*, IRSC, SPC, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be

emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Managerial Economics

Admission Program Objective Code: BMET
State CIP Code: 1192401010

Offered at UCF, UNF, USF*, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520601
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Marketing Management

Admission Program Objective Code: BMKT
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU*, FSU*, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521401
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Teacher Education/Business Technology Education

Admission Program Objective Code: BTEA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

- XXXXXXX - Elective in Business Administration*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business, General

Admission Program Objective Code: BUTN
State CIP Code: 1192401010

Offered at FSU*, UCF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Cardiopulmonary Science

Admission Program Objective Code: CARD
State CIP Code: 1192401010

Offered at FSWSC, VC*, FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510908
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- CGSX060 (required at FAMU only)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemical Engineering

Admission Program Objective Code: CHEN
State CIP Code: 1192401010

Offered at FIU, FAMU, FSU, USF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Chemical Sciences - Chemical Sciences

Admission Program Objective Code: CMSI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

AA Transfer Major: Chemical Sciences - FSU Teach

Admission Program Objective Code: CMST
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions,

applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemistry

Admission Program Objective Code: CHEM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Chemistry Teacher Education

Admission Program Objective Code: CHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Civil Engineering

Admission Program Objective Code: CIVI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UNF, FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Communication and Media Studies

Admission Program Objective Code: COMS
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090199
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Communications (Mass), Media Studies or Converged Communications

Admission Program Objective Code: COMM
State CIP Code: 1192401010

Offered at FGCU, FSCJ, UCF, UNF, USFSP, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090102
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health

Admission Program Objective Code: COMH
State CIP Code: 1192401010

Offered at FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512208
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health Liaison

Admission Program Objective Code: CMHL
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

- STAXXXX - Any course with the STA prefix

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

AA Transfer Major: Computational Biology

Admission Program Objective Code: BICP
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas,

volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

Transfer Major Physical Sciences Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computational Science

Admission Program Objective Code: CMPT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

- BSCXXXXC - Any lab course with the BSC prefix
  or
- CHMXXXXC - Any lab course with the CHM prefix
  or
- GLYXXXXC - Any lab course with the GLY prefix
  or
- METXXXXC - Any lab course with the MET prefix
  or
- PHYXXXXC - Any lab course with the PHY prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science

Admission Program Objective Code: CMIN
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- Choose two science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)
  *See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science (FSU only)

Admission Program Objective Code: CFSU
State CIP Code: 1192401010

Offered at FSU*
Transfer Program CIP code: 110101, track 2/6

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Science (UNF only)

Admission Program Objective Code: CUNF
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Technology

Admission Program Objective Code: CIIT
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- An introductory object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SPCXXXX - Any course with the SPC prefix

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science- Information Systems

Admission Program Objective Code: CIS
State CIP Code: 1192401010

Offered at FAMU, UF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - High level programming language course*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

or

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Criminology

Admission Program Objective Code: CMCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430116
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- COP2XXX - Any computer programming course*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

AA Transfer Major: Computer Engineering - Computer & Information Engineering

Admission Program Objective Code: CMPE
State CIP Code: 1192401010

Offered at FAMU, FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Engineering - Computer Engineering

Admission Program Objective Code: CMEN
State CIP Code: 1192401010

Offered at FAMU, UF, FAU, FIU, FSU, UCF, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 1/3
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Networking (BAS)

Admission Program Objective Code: CNET
State CIP Code: 1192401010

Offered at FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110901
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Science - BA in Computer Science (Track 6/6) (FSU)

Admission Program Objective Code: CMSC
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 6/6
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computer Software & Media Applications

Admission Program Objective Code: CSFM
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Construction Engineering

Admission Program Objective Code: CONS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Criminal Justice Studies

Admission Program Objective Code: CRIM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, PSC, UCF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Criminology

Admission Program Objective Code: CRMO
State CIP Code: 1192401010

Offered at UF*, USF, USFSM, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Dental Hygiene (BAS)

Admission Program Objective Code: DEHY
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510602
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Dietetics/Nutritional Services

Admission Program Objective Code: DIET
State CIP Code: 1192401010

Offered at FIU*, FSU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international

issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Dietetics/Nutritional Services - Dietetics

Admission Program Objective Code: DIEN
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Digital Media

Admission Program Objective Code: DGMD
State CIP Code: 1192401010

Offered at FSCJ, GCSC, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 100304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

Associate in Arts Degree or Associate in Science Degree in Graphics, Design, Digital Media, Information Technology or related fields.

AA Transfer Major: Drama Education

Admission Program Objective Code: DRAM
State CIP Code: 1192401010

Offered at FAMU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this

course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Economics - Business

Admission Program Objective Code: ECOB
State CIP Code: 1192401010

Offered at FAMU, FAU, UF, UNF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Economics - Social Sciences

Admission Program Objective Code: ECON
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU*, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 1/2
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Education of Blind & Visually Handicapped

Admission Program Objective Code: EDBL
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131009
*See note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Education, General

Admission Program Objective Code: EDTR
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Educational Studies

Admission Program Objective Code: EDST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 139999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

NOTE: Completion of this program does not result in educator certification.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Electrical, Electronics Engineering

Admission Program Objective Code: ELEL
State CIP Code: 1192401010

Offered at UF, FAMU, FAU, FSU, UCF, UNF, USF, FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141001, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Electronic Engineering Technology - Electrical & Computer Engineering Technology

Admission Program Objective Code: ELEC
State CIP Code: 1192401010

Offered at FAMU, VC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric

substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Elementary Teacher Education

Admission Program Objective Code: ELED
State CIP Code: 1192401010

Offered at CC, DSC, FAMU, FGCU, FSU*,FSWSC, NWFSC, PSC, SFSC, UCF, UF*, USF, USFSM, USFSP, UWF, FIU, FAU, SPC, IRSC, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131202
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Energy Technology Management (BAS)

Admission Program Objective Code: ENRG
State CIP Code: 1192401010

Offered at SCFMS

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements

for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Engineering Technology

Admission Program Objective Code: ENGN
State CIP Code: 1192401010

Offered at DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 159999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

AA Transfer Major: English Language and Literature

Admission Program Objective Code: ENLI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 230101
* See Note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: English Teacher Education

Admission Program Objective Code: ENTE
State CIP Code: 1192401010

Offered at CC, FAU, FSU, FSWSC, UCF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131305
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix
  or

- ENLXXXX - Any course with the ENL prefix

AA Transfer Major: Entomology

Admission Program Objective Code: ENTM
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260702
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Entrepreneurship

Admission Program Objective Code: ENTR
State CIP Code: 1192401010

Offered at USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Environmental Health Engineering

Admission Program Objective Code: ENVR
State CIP Code: 1192401010

Offered at FIU, FGCU, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Environmental Science

Admission Program Objective Code: ENVS
State CIP Code: 1192401010

Offered at FSU (BA only), UF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030104, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Environmental Science - Geography/Environmental Management

Admission Program Objective Code: ENVG
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130104, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FAU, UNF)

Admission Program Objective Code: EXFA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FGCU only)

Admission Program Objective Code: EXFG
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (USF only)

Admission Program Objective Code: EXUS
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and

inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Finance, General (BS) or Banking (BAS)

Admission Program Objective Code: FINB
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU*, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF, SPC (BAS)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520801
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial

records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the

activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences,

correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Financial Services

Admission Program Objective Code: FINS
State CIP Code: 1192401010

Offered at UNF, FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Fire and Emergency Services

Admission Program Objective Code: FRES
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430203
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Fire Science Management (BAS)

Admission Program Objective Code: FIR1
State CIP Code: 1192401010

Offered at FSCJ
Transfer Program CIP code: 430202

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Dietetics

Admission Program Objective Code: FSTD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Food Science

Admission Program Objective Code: FOOD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 1/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Foreign Language, Multiple

Admission Program Objective Code: FORG
State CIP Code: 1192401010

Offered at UCF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.*

*See Notes on Common Course Prerequisite Manual

AA Transfer Major: Forensic Science

Admission Program Objective Code: FORE
State CIP Code: 1192401010

Offered at FGCU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic

acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Forest Resources & Conservation - Wildlife Ecology & Conservation

Admission Program Objective Code: FORW
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: General Studies

Admission Program Objective Code: GENS
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology

Admission Program Objective Code: GEOT
State CIP Code: 1192401010

Offered at FAU, FIU, FSU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 400601, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and

climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology - Earth Science Teacher Education

Admission Program Objective Code: GEEA
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400601
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geomatics Engineering

Admission Program Objective Code: GEOE
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Geoscience - FSU Teach

Admission Program Objective Code: GEOS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Gerontology

Admission Program Objective Code: GERO
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 301101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Graphic Design

Admission Program Objective Code: GRPH
State CIP Code: 1192401010

Offered at FAMU, FSU*, UF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500409
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix

AA Transfer Major: Health and Physical Education, General - Exercise Science

Admission Program Objective Code: HPEE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health and Physical Education, General - Health, Leisure, and Fitness Studies

Admission Program Objective Code: HPEH
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health and Physical Education, General - Physical Education

Admission Program Objective Code: HPEP
State CIP Code: 1192401010

Offered at FAMU, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- 4 Credit hours in Skill Development Courses in Physical Activities
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Information Management

Admission Program Objective Code: HEIM
State CIP Code: 1192401010

Offered at FAMU, UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510706
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- CGSXXXX - Any course with the CGS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science (Track 5/7) (SSCF, FGCU)

Admission Program Objective Code: HESC
State CIP Code: 1192401010

Offered at FGCU, SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Community Health (Track 6/7) (UNF)

Admission Program Objective Code: HUNF
State CIP Code: 1192401010

Offered at UNF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Concentration in Physician Assistant Studies (Track 2/7) (MDC)

Admission Program Objective Code: HMDC
State CIP Code: 1192401010

Offered at MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Pre-Clinical/Pre-Physical Therapy (Track 3/7) (FAMU, UCF)

Admission Program Objective Code: HSPC
State CIP Code: 1192401010

Offered at FAMU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Services Administration

Admission Program Objective Code: HLSR
State CIP Code: 1192401010

Offered at SFC, FAMU, FAU, FGCU, FIU, IRSC, SCFMS, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Health Services Administration (BAS)

Admission Program Objective Code: HSAD
State CIP Code: 1192401010

Offered at EFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512211
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health Teacher Education (FSU)

Admission Program Objective Code: HTED
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131307
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: History

Admission Program Objective Code: HIST
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 540101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

AA Transfer Major: Honors College (FAU)

Admission Program Objective Code: HONB
State CIP Code: 1192401010

Offered at FAU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 2/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Honors College (NCF)

Admission Program Objective Code: HONA
State CIP Code: 1192401010

Offered at NCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 1/2
*See note in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FAU, FSU, UWF)

Admission Program Objective Code: HAMB
State CIP Code: 1192401010

Offered at FAU, FSU*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher
or

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FIU)

Admission Program Objective Code: HAMD
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (Track 1/4) (FIU, FSU, UCF)

Admission Program Objective Code: HAMA
State CIP Code: 1192401010

Offered at FIU, FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (USFSM)

Admission Program Objective Code: HAMC
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be

emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Human Resource Management

Admission Program Objective Code: HRMG
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Human Services

Admission Program Objective Code: HUSR

Offered at FSCJ, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Humanities

Admission Program Objective Code: HUMA
State CIP Code: 1192401010

Offered at FSU, UCF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Industrial & Systems Engineering

Admission Program Objective Code: INSY
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Industrial/Manufacturing Engineering

Admission Program Objective Code: INDS
State CIP Code: 1192401010

Offered at FAMU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Information Sciences and Studies - Computer Information Systems EN EIF

Admission Program Objective Code: INSC
State CIP Code: 1192401010

Offered at EFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (BC, FAMU, FIU, FSU, USF, UWF)

Admission Program Objective Code: INTB
State CIP Code: 1192401010

Offered at BC, FAMU, FIU, FSU, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 2/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)*
- COPXXXX - Any computer programming course*
- COPXXXX - COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
- MACXXXX Pre-Calculus course or Discrete Math
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (UCF, USFSM, DSC)

Admission Program Objective Code: INTA
State CIP Code: 1192401010

Offered at UCF, USF, USFSM, DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- PSYXXXX - Any course with the PSY prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)
- COP2XXX - Any computer programming course*
- PHYXXXX - Any course with the PHY prefix
- COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Insurance

Admission Program Objective Code: INSU
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interdisciplinary Studies

Admission Program Objective Code: INTE
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 309999
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and

properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interior Design (BAS)

Admission Program Objective Code: INDE
State CIP Code: 1192401010

Offered at SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500408, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International /Global Studies

Admission Program Objective Code: INTG
State CIP Code: 1192401010

Offered at UCF, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 302001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Business Management

Admission Program Objective Code: INTN
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, SCFMS, SPC, USF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Relations

Admission Program Objective Code: INTR
State CIP Code: 1192401010

Offered at FIU, FSU, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jewish Studies

Admission Program Objective Code: JWST
State CIP Code: 1192401010

Offered at FAU, FU
Transfer Program CIP code: 380206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Journalism

Admission Program Objective Code: JOUR
State CIP Code: 1192401010

Offered at UCF*, FAMU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Social Science Ed

Admission Program Objective Code: MTES
State CIP Code: 1192401010

Offered at UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  AND
- AMHXXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Special Ed

Admission Program Objective Code: MTSP
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade English Ed

Admission Program Objective Code: MTEN
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

- AMLXXXX - Any course with the AML prefix
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Science Ed

Admission Program Objective Code: MTMS
State CIP Code: 1192401010

Offered at NWFSC, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically

about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab

or

- METXXXXC - Any course with the MET prefix that includes a lab

or

- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Social Science Ed

Admission Program Objective Code: MTSS
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 4/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade English Ed

Admission Program Objective Code: MTSE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab

or

- METXXXXC - Any course with the MET prefix that includes a lab

or

- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade Social Science Ed

Admission Program Objective Code: MTSC
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix and a lab

or

- METXXXXC - Any course with the MET prefix and a lab

or

- OCEXXXXC - Any course with the OCE prefix and a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (FSU)

Admission Program Objective Code: LATA
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050134
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (UCF)

Admission Program Objective Code: LAAS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Assisting

Admission Program Objective Code: LEGA
State CIP Code: 1192401010

Offered at UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Studies, General (UCF)

Admission Program Objective Code: LEGL
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- No specific courses are required

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Liberal Arts & Sciences

Admission Program Objective Code: LIAS
State CIP Code: 1192401010

Offered at FAU, FIU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Linguistics

Admission Program Objective Code: LING
State CIP Code: 1192401010

Offered at FAU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- XXXXXXX - Demonstrated competency by testing or completion of a foriegn language through the intermediate level (SPN 2220 - Spanish III or ASL 2160 - American Sign Language III at NWFSC)*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management and Supervision (BAS - NWF)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(Also see Supervision and Management)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Info Systems - Business/Data Processing/Business Information Mgt

Admission Program Objective Code: MGIN
State CIP Code: 1192401010

Offered at FAU, FGCU, FSU*, SSCF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Science

Admission Program Objective Code: MGNT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Marine/Aquatic Biology

Admission Program Objective Code: MARI
State CIP Code: 1192401010

Offered at FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Marketing, Other - Advertising

Admission Program Objective Code: MARO
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521499
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Materials Engineering

Admission Program Objective Code: MATE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems,

mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Mathematics General - Mathematics General

Admission Program Objective Code: MATH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (Please check with your transfer institution for the appropriate course)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Jr. High/Middle School Mathematics Ed (NWF)

Admission Program Objective Code: MATN
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- MACXXXX - Any course with the MAC prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Secondary Mathematics Education

Admission Program Objective Code: MATR
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FSWSC, IRSC, UNF, USF, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

- MACXXXX - Any course with the MAC prefix
  or
- MTGXXXX - Any course with the MTG prefix
  or
- MASXXXX - Any course with the MAS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - FSU - Teach

Admission Program Objective Code: MFSU
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - Mathematics Teacher Education

Admission Program Objective Code: MFIU
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mechanical Engineering

Admission Program Objective Code: MECH
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FPU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems,

mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Medical Technology/Clinical Laboratory Sciences

Admission Program Objective Code: MEDC
State CIP Code: 1192401010

Offered at USF, SFC, FGCU, UCF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511005
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Meteorology - Meteorology

Admission Program Objective Code: METE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400401, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Microbiology/Bacteriology

Admission Program Objective Code: MCBA
State CIP Code: 1192401010

Offered at UCF, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied

point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Middle Eastern Studies

Admission Program Objective Code: MIDE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050108
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Motion Picture & Television Technology

Admission Program Objective Code: MOTP
State CIP Code: 1192401010

Offered at FSU*, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500602, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Multi-/Interdisciplinary Studies

Admission Program Objective Code: MULT
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300000
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Music Composition (FSU)

Admission Program Objective Code: MUCO
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500904
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix **4 Credit Hours**
- MV(K/S/V) XX1X (Applied Music course) **2-4 Credit Hours**
- MV(K/S/V) XX2X (Applied Music course) **2-4 Credit Hours**
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Performance (FGCU, FSU, UCF, UNF, USF, UWF)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500903
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Studies (USF)

Admission Program Objective Code: MSTU
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 509999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of

analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General (FAMU, FAU, FSU*, UF*, FIU*) (Track 1/2)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU*, UF*, FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7^{th} chords, augmented 6^{th} chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nonprofit Management (UCF)

Admission Program Objective Code: NPRO
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nuclear Engineering

Admission Program Objective Code: NUCL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Nursing (Track 1/2)

Admission Program Objective Code: NRSN
State CIP Code: 1192401010

Offered at FAMU*, FAU*, FGCU*, FIU*, FSU*, UCF*, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, Track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nursing - AS to BS (NWF)

Admission Program Objective Code: NUR1
State CIP Code: 1192401010

Offered at BC, CC, CCF, DSC*, FAMU*, FAU*, FSCJ, FSWSC, GCSC, NWFSC, PBSC, PESC, PHSC, PSC, SCFMS, SFC, SFSC, IRSC, SPC, SJRSC, TCC, FGCU*, FIU*, FSU*, FGC, MDC, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Paralegal Studies (BAS)

Admission Program Objective Code: PLAA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302, 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Parks & Recreation Management

Admission Program Objective Code: PRKF
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

AA Transfer Major: Parks & Recreation Management - Hospitality, Recreation & Resort Management

Admission Program Objective Code: PRKH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Parks & Recreation Management - Instruction

Admission Program Objective Code: PKRE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 310301, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Parks & Recreation Management - Recreation and Tourism

Admission Program Objective Code: PRKT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the

individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Parks & Recreation Management - Recreation, Tourism & Events

Admission Program Objective Code: PRKR
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

AA Transfer Major: Pharmaceutical Science

Admission Program Objective Code: PHAR
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate

system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Pharmacy (Pharm D)

Admission Program Objective Code: PHAD
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512001
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy

Admission Program Objective Code: PHIL
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy and Religion

Admission Program Objective Code: PHRL
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 389999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Photonics Science and Engineering

Admission Program Objective Code: PHEN
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141003
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Education Teacher Education

Admission Program Objective Code: PHED
State CIP Code: 1192401010

Offered at FIU, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

or

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

- PELXXXX - 4-5 credit hours of courses with the PEL prefix
- PEMXXXX - 3 hours of courses with the PEM prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Science

Admission Program Objective Code: PHSC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physical Science - FSU Teach

Admission Program Objective Code: PHYT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physics

Admission Program Objective Code: PHYS
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physics Teacher Education

Admission Program Objective Code: PHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus,

area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Political Science & Government

Admission Program Objective Code: POTL
State CIP Code: 1192401010

Offered at FAU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Pre-Elementary/Early Childhood Teacher Ed - Age 3 through Grade 3

Admission Program Objective Code: ECHA
State CIP Code: 1192401010

Offered at CCF, FGC, FGCU, FSCJ, FSU*, MDC, NWFSC, PSC, SCFMS, SFC, SJRSC, UCF, UNF, UWF, SPC, USF, USFSM, FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131210
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Professional Communication

Admission Program Objective Code: PRCO
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090900
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Project Management (BAS - NWF)

Admission Program Objective Code: PROJ
State CIP Code: 1192401010

Offered at NWFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Psychobiology

Admission Program Objective Code: PSYB
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422706
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Psychology, General

Admission Program Objective Code: PSCH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 420101
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- One of the following Biology courses: BSC 1005, BSC 1010C, BSC 1011C, BSC 1080, BSC 1085C, BSC 1086C, BSC 2020C
  or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- One of the following Psychology courses: CLP 1001, CLP 2140, DEP 2004, DEP 2100

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Health (FGCU, USF)

Admission Program Objective Code: PUBH
State CIP Code: 1192401010

Offered at FGCU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is

an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Policy and Administration

Admission Program Objective Code: PUBP
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, IRSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Relations & Organizational Communication

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090902
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in

preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading

achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety and Security

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety Mgt (BAS) or Public Admin (BAS) or Public Safety/Homeland Security

Admission Program Objective Code: PBHL
State CIP Code: 1192401010

Offered at FAU, FSCJ, FSWSC, MDC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 439999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radio & TV Broadcasting

Admission Program Objective Code: RADO
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radiologic and Imaging Science

Admission Program Objective Code: RDTC
State CIP Code: 1192401010

Offered at VC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

> *To be admitted, a student must have current American Registry of Radiologic Technologists (ARRT) certification.**
>
> * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Real Estate

Admission Program Objective Code: REAL
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521501
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Religious Studies

Admission Program Objective Code: RELG
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Resort & Hospitality Management

Admission Program Objective Code: RSHO
State CIP Code: 1192401010

Offered at FGCU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520906
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Restaurant and Food Service Management

Admission Program Objective Code: REST
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Rhetorical Speech & Communication

Admission Program Objective Code: RHET
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 231304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Russian & East European Studies

Admission Program Objective Code: RUSS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050105
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Ed (BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC)

Admission Program Objective Code: SCIB
State CIP Code: 1192401010

Offered at BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131322
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEB
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 1/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Choose any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (DSC, MDC)

Admission Program Objective Code: SCIC
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131323
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEC
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 2/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to

have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Earth/Space Teacher Education

Admission Program Objective Code: STEE
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 3/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Middle Grades Science Teacher Education (NWF)

Admission Program Objective Code: MSCI
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 5/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Physics Teacher Education

Admission Program Objective Code: STEP
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Offered at DSC, MDC - CIP code 131329

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 4/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - English

Admission Program Objective Code: SETE
State CIP Code: 1192401010

Offered at UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

or

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - Social Science

Admission Program Objective Code: SESS
State CIP Code: 1192401010

Offered at FAMU, UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Biology Teacher Education (Track 4/6) (UCF)

Admission Program Objective Code: BTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Select one course from the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Select one course from the following:

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.
or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Chemistry Teacher Education (Track 5/6) (UCF)

Admission Program Objective Code: CTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

Select from the following groups of courses:

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered

if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Physics Teacher Education (Track 6/6) (UCF)

Admission Program Objective Code: PHYE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program

leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Secondary Mathematics Teacher Education (Track 3/6) (UCF)

Admission Program Objective Code: SMTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Select one course from the following:
MAC XXXX
or MTG XXXX
or MAS XXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Psychology

Admission Program Objective Code: SOPS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422707
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences Teacher Ed (History, Social Science, Economics, and Political Science)

Admission Program Objective Code: SSTE
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131317
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences, General

Admission Program Objective Code: SOSI
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, USF, USFSM, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- Choose any two AA General Education Social Science courses

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Work, General

Admission Program Objective Code: SOWR
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF*, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of

"C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Sociology

Admission Program Objective Code: SOCI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- Two Sociology courses - Choose from: SYG 2000, SYG 2010, SYG 2430

AA Transfer Major: Sociology - Anthropology

Admission Program Objective Code: SOAN
State CIP Code: 1192401010

Offered at FUI

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Spanish

Admission Program Objective Code: SPAN
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Special Education, General

Admission Program Objective Code: SPED
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF, SPC, IRSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Speech Communication and Rhetoric

Admission Program Objective Code: SPCO
State CIP Code: 1192401010

Offered at FAU, FIU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Speech Pathology & Audiology (FSU, UCF, UF, USF)

Admission Program Objective Code: SPCP
State CIP Code: 1192401010

Offered at FSU*, UCF, UF*, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course with the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology (USFSM)

Admission Program Objective Code: SPCU
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course the the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology - Deaf Studies Concentration

Admission Program Objective Code: SPCH
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Sport Management

Admission Program Objective Code: SPME
State CIP Code: 1192401010

Offered at FSU, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- MARXXXX - Any course with the MAR prefix
  or
- GEBXXXX - Any course with the GEB prefix

- MANXXXX - Any course with the MAN prefix
  or
- BULXXXX - Any course with the BUL prefix
  or
- CGSXXXX - Any course with the CGS prefix
  or
- STA 2023 - Statistics **4 Credit Hours**
  or
- ACGXXXX - Any course with the ACG prefix

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

or

- ECOXXXX - Any course with the ECO prefix (ECO 2013 or ECO 2023)

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Statistics

Admission Program Objective Code: STAT
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas,

volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- Two laboratory based science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art

Admission Program Objective Code: SDAR
State CIP Code: 1192401010

Offered at FAMU, FGCU,, FIU, FSU*, UCF, UF*, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARTXXXX - Two courses with the ART prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art - Graphic Design

Admission Program Objective Code: SDGD
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- ARHXXXX - Any course with the ARH prefix

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Supervision & Management (BAS), Organizational Mgt (BAS), Business & Org Mgt (BAS), Administration & Supervision (BAS), Spvr & Org Mgt (BAS) Mgt & Org Leadership (BAS)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(CIP 520299 is Management and Supervision at NWFSC)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Supply Chain Management (BAS)

Admission Program Objective Code: SUPP
State CIP Code: 1192401010

Offered at BC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520203, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Surveying

Admission Program Objective Code: SURV
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 151102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Sustainability and Built Environment

Admission Program Objective Code: SSBL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Sustainability Management - BAS

Admission Program Objective Code: SUST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Students with the following Associate in Science (AS) degrees will be admitted: Environmental Science Technology, Architectural Design & Construction Technology, Drafting and Design Technology or Engineering Technology.

Students who do not have one of the AS degrees listed will be required to take 15 credits in related coursework which mirrors coursework for SPC's AS in Environmental Science Technology degree requirements.

- The courses include: ARCXXXX, CHMXXXX, ECO 2013, ECO 2023, EETXXXX, ETM 1010C, ESCXXXX, EVRXXXX, GLYXXXX, GIS 1040C, OCEXXXX, PHYXXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Teacher Education, Multiple Levels (Track 1/3) (USFSP)

Admission Program Objective Code: TCHE
State CIP Code: 1192401010

Offered at USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Teacher Education, Multiple Levels - Art Education (Track 2/3) (UCF)

Admission Program Objective Code: ARTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General

Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

Select one course from the following:

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Technology Management (BAS)

Admission Program Objective Code: TCMG
State CIP Code: 1192401010

Offered at BC, FSCJ, GCSC, PBSC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 111099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

Admission into this BAS program requires an AS degree from a regionally-accredited institution in Computer Engineering Technology, Computer Information Technology, Computer Programming or Database Technology. Students with an AA degree, 60 credit hours but no degree, or an AS degree in another area may be admitted by the Dean on a case-by-case basis.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Tourism and Travel Services Management

Admission Program Objective Code: TOUR
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case

studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Trade & Industrial Teacher Ed (Vocational)

Admission Program Objective Code: TRAD
State CIP Code: 1192401010

Offered at FIU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131320
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- 15 hours in courses from the area of specialization*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Transportation Management

Admission Program Objective Code: TRAN
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520209
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Urban & Regional Planning

Admission Program Objective Code: URBA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Urban Design

Admission Program Objective Code: URDS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Veterinary Technology (BAS)

Admission Program Objective Code: VET
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510808
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Vocational Rehabilitation Counseling

Admission Program Objective Code: VOCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512310
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SYGXXXX - Any course with the SYG prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Women's Studies

Admission Program Objective Code: WOMN
State CIP Code: 1192401010

Offered at FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050207
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Zoology

Admission Program Objective Code: ZOO
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure,

evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Health Science (Track 1/7) (FAU, UF*, USF, USFSP, UWF)

Admission Program Objective Code: HSCI
State CIP Code: 1192401010

Offered at FAU, UF*, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select one course from the following:

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular

growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

or

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Interdisciplinary Medical Science (Track 7/7) (FSU)

Admission Program Objective Code: MESI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select from the following:

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General - Music Teacher Education (FIU*) (Track 2/2)

Admission Program Objective Code: MTEA
State CIP Code: 1192401010

Offered at FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of

analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Programs

AA Transfer Majors indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

The following list indicates the AA transfer majors that can be completed taking courses at NWF State College. It is not a complete list of all university transfer majors. The Common Course Prerequisite Manual lists all university transfer programs available in the State of Florida.

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWF **State College** *recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.*

Associate in Arts Degree

The Associate in Arts degree is equivalent to the first two years of a bachelor's degree program and is offered for those students planning to transfer to a four-year institution or to remain at NWF State College to complete the last two years of a bachelor's degree program. The AA degree is awarded upon satisfactory completion of 60 credit hours of general education and college credit electives, attainment of the appropriate minimum grade point averages, and completion of all other applicable college graduation requirements, including the Speaking-Across-the-Curriculum and Technology-Across-the-Curriculum requirements. Although the number of credits and specific courses required for a bachelor's degree may vary across upper-division schools, the Florida community colleges and universities enjoy an articulation agreement, which guarantees certain transfer rights for students who complete the AA degree.

A.A. degree students should work closely with an Academic Advisor or faculty advisor to select the appropriate courses to meet their degree goals.

Graduation Requirements for the AA Degree

The A.A. degree curriculum requires the following.

- Complete a minimum of 60 college credits per the following distribution as outlined in the AA Degree General Education Requirements:
    - Complete 36 credit hours of general education courses distributed appropriately across the Communications, Humanities, Social Sciences, Mathematics, Natural Sciences, and General Education Elective categories presented in the AA Degree General Education Requirements section of the catalog for specific courses.
    - Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
    - Complete 24 credit hours of college credit electives. (Students should consult with a counselor or advisor to select the electives most appropriate to their intended baccalaureate program.)
- Meet the Gordon Rule (FAC Rule 6A-10.030) minimum grade and writing requirements:
    - Attain a grade of "C" or higher in each Gordon Rule writing course (any general education course from the Communications or Humanities categories, and those designated as Gordon Rule in the Social Science category) whether credits in such courses are earned at NWF State College or elsewhere.
    - Complete the Gordon Rule writing requirement (students who complete 6 credits each from the Communications and Humanities categories and an additional Gordon Rule Social Science course will satisfy this requirement).

    - Attain a grade of "C" or higher in each Gordon Rule Mathematics course (any course from the Mathematics category that is used to meet AA general education requirements), whether credits in such courses are earned at NWF State College or elsewhere.
- Meet the Civic Literacy Competency (FAC Rule 6A-10.02413). All first-time-in college students beginning in the 2018-19 academic year must demonstrate civic literacy competency prior to graduation either through successful completion (with a grade of "C" or higher) of POS 1041 or AMH 2020 or by achieving a passing score on an assessment.

Assessment	Standard Score
AP Government and Politics: United States	3
AP United States History	4
CLEP: American Government	50

- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWFSC.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Transferring to another Four-Year College or University within the State of Florida:

Faculty members, counselors and advisors will gladly assist students in achieving a smooth transfer to other institutions in Florida. Liaison representatives from the respective public institutions in the state are eager to help. Several of the liaisons make regular visits to campus and will meet directly with students to answer questions. The names of the liaisons and dates of upcoming visits are available in the Advising Center in the Student Services Center on the Niceville Campus. In addition, Common Prerequisite Manuals for the Florida State University System are available on RaiderNet or at www.flvc.org.

It is desirable that students transferring to a senior institution plan their program so that common prerequisites can be completed for the upper-division transfer school for their major. It is best for the student to complete the entire two-year degree program prior to transfer, as A.A. graduates who transfer to one of the institutions in the Florida State University System (SUS) enjoy certain protections under the statewide articulation agreement. These rights are presented in the "Student Bill of Rights".

NWF State College offers the necessary prerequisites for most of the State of Florida University Baccalaureate Programs. Students are encouraged to consult a current catalog from the upper-division school where they plan to transfer in addition to meeting with a college advisor or faculty member to acquire an official program plan of study for their intended major.

Special Foreign Language Requirements for Entry into Upper-Level Florida Universities:

Effective August 1, 1990, according to requirements of the Florida Board of Regents, new applicants to any of the state universities must have completed two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination. There are two exceptions to this requirement: 1) students who received an A.A. degree prior to September 1, 1989, or 2) students who enrolled in a program leading to an A.A. degree prior to August 1, 1989 and maintained continuous enrollment. Students who are not exempt but fail to satisfy the requirement, may be admitted to the university as part of the 5% admissions exceptions group but will be required to complete eight-ten credit hours in one foreign language as a graduation requirement, regardless of the requirements in the student's major. Students transferring into the Florida SUS without an A.A. degree or fewer than 60 transferable credits must meet this foreign language requirement before going on to the upper division. NWF State College offers the necessary coursework in French, Spanish, Chinese and American Sign Language (ASL) to meet the Florida SUS admission requirements.

Student Bill of Rights

Florida Community College Associate in Arts (AA) Degree graduates are guaranteed rights under the Statewide Articulation Agreement (State Board of Education Rule 6A-10.024).

AA Transfer Majors

AA Transfer Majors indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

The following list indicates the AA transfer majors that can be completed taking courses at NWF State College. It is not a complete list of all university transfer majors. The Common Course Prerequisite Manual lists all university transfer programs available in the State of Florida.

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWF **State College** *recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.*

Associate in Arts

AA - Associate in Arts General Degree

Admission Program Objective Code AAGD
State CIP Code 1192401010

The AA is primarily intended as a transfer degree for students continuing to a 4 year bachelor's program at a university or state college. The AA Transfer Programs indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed.

Associate in Arts students must complete 60 college credits to complete the degree; 36 of these credits must be general education credits distributed across five subject area categories. A student must satisfy the required number of credits in each category. The remaining 24 elective credits should be selected in consultation with an advisor, who will assist with selecting the college credits most advantageous to the student's educational goals.

General Education

In consultation with an advisor, choose appropriate General Education courses that fulfill your AA Degree Concentration for University Transfer Major. Select courses from each area as listed below; see the AA Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- ____ ____ - Core Mathematics **3 Credit Hours**
- ____ ____ - General or Core Mathematics **3 Credit Hours**
- ____ ____ - Biological Sciences **3 Credit Hours****
- ____ ____ - Physical Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours*****
- ____ ____ - History/Government Social Sciences **3 Credit Hours*****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

*** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

AA Elective Requirements

In consultation with an advisor, select appropriate AA degree college credit electives that fulfull your AA Degree Concentration for University Transfer Major:

- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**

Total Elective Credits Required: 24

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

AA General Degree (AA) (AAGD)

First Year

Fall Semester

Core Mathematics **- 3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Core Humanities **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Core or General Mathematics **- 3 Credit Hours**

ENC 1102 - English Composition II **3 Credit Hours ¶**

Core or General Humanities **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

Biological Science* **- 4 Credit Hours**

Behavioral Social Science** **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 16

Spring Semester

Physical Science* **- 4 Credit Hours**

History/Government Social Science** **- 3 Credit Hours** Elective or Additional General Education Hours*** **- 4 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 60
* At least one Science course must come from the core. ** At least one Social Science course must come from the core. *** Students who have already satisfied the 36 hour General Education requirement may take a general Elective.

AA Degree Checklist:

- Have you completed a minimum of 60 credit hours in the following areas?
    - 36 Hours of General Education
        - 6 hours in Communications ("C" or better)
        - 6 hours in Mathematics ("C" or better)
        - 6 hours in Humanities ("C" or better)
        - 8 hours in Natural Science
        - 6 hours in Social Sciences ("C" or better in History/Government Social Science category)
        - 4 hours in Additional General Education Credits (if needed)
    - 24 hours of college credit A.A. transferable electives
- Have you completed at least 15 of the 60 credits at NWF State College?
- Have you completed the foreign language requirement?
- Have you met the minimum 2.0 GPA requirements for the A.A.?
- Have you met the Civic Literacy Competency requirement for the A.A?
- Have you applied for graduation by the advertised deadline?

AA Degree Concentrations for University Transfer Majors

AA Transfer Major: Accounting

Admission Program Objective Code: ACCO
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, IRSC, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520301
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Actuarial Science

Admission Program Objective Code: ACTU
State CIP Code: 1192401010

Offered at FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular,

cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Advertising

Admission Program Objective Code: ADVE
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090903
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Aerospace Engineering

Admission Program Objective Code: AERO
State CIP Code: 1192401010

Offered at UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: African-American (Black) Studies

Admission Program Objective Code: AFRI
State CIP Code: 1192401010

Offered at FAMU, FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Agricultural (Food & Resource) Economics

Admission Program Objective Code: AGRI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Agricultural Engineering

Admission Program Objective Code: AGRE
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Agricultural Teacher Education (Vocational)

Admission Program Objective Code: AGTE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Agriculture Science

Admission Program Objective Code: AGRS
State CIP Code: 1192401010

Offered at UFAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: American Studies (USA)

Admission Program Objective Code: AMER
State CIP Code: 1192401010

Offered at FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050102
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Anthropology

Admission Program Objective Code: ANTH
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Classes

- ANTXXXX - Any course with ANT prefix
- ANTXXXX - Any course with ANT prefix

AA Transfer Major: Applied Physiology and Kinesiology

Admission Program Objective Code: APPK
State CIP Code: 1192401010

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Offered at FSU, UF
Transfer Program CIP code: 260908
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the

individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Applied Science

Admission Program Objective Code: APPL
State CIP Code: 1192401010

Offered at FGCU, UCF, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Majors Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Architecture - FAMU/NWF Pre-Articulation Agreement

Admission Program Objective Code FAMU
State CIP Code 1192401010

Articulation Agreement with the Florida A&M University (FAMU) School of Architecture:

An articulation agreement between NWF State College and Florida A&M University (FAMU) School of Architecture allows students to earn an Associate in Arts (A.A.) degree that could qualify them for entrance to the upper-division of the Bachelor of Science in Architectural Studies degree program at FAMU. It is highly recommended that, in addition to the common prerequisites listed below, students should consult the current catalog from FAMU. Some SUS programs have restricted access or are considered Limited Access programs. Students are responsible for completing the specific requirements for admissions. For more information on the FAMU A.A. to B.S. articulation, contact Mr. Ray Rickman at 729-5218 or rickmanr@nwfsc.edu.

Associate in Arts Degree/Pre-Architecture FAMU Prerequisites

Please consult the Course Description section of the catalog for the required prerequisites of all courses needed to satisfy the requirements of this program. Students must meet NWFSC A.A. degree graduation requirements.

General Education

Undesignated courses are to be selected from the General Education Requirements listed in the AA Degree General Education Requirements section of catalog for specific courses.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

Total General Education Credits Required: 36

Program Electives

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an

articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with

Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

Total Program Elective Credits Required: 36

Total Articulation Program Credits Required: 72

AA Transfer Major: Art History & Appreciation

Admission Program Objective Code: ARTA
State CIP Code: 1192401010

Offered at FIU, FSU, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500703
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- XXXXXXX - Competency requirement for a single foreign language*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Art Teacher Education

Admission Program Objective Code: ARTT
State CIP Code: 1192401010

Offered at FIU, UCF, UF*, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131302
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Art, General

Admission Program Objective Code: ART
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, UCF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing

problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.
or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARHXXX - Any course with ARH prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Asian Studies

Admission Program Objective Code: ASIA
State CIP Code: 1192401010

Offered at FIU, FSU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Astronomy

Admission Program Objective Code: ASTR
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Athletic Training

Admission Program Objective Code: ATHL
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510913
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Behavioral Healthcare

Admission Program Objective Code: BEHA
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biochemistry

Admission Program Objective Code: BICY
State CIP Code: 1192401010

Offered at FGCU, FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences - Interdisciplinary Natural Sciences

Admission Program Objective Code: BIOP
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 16/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Chemistry

Admission Program Objective Code: BICH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 1/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of

ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Computer Science

Admission Program Objective Code: BICO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 2/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the

concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Earth Science

Admission Program Objective Code: BIEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 3/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Mathematics

Admission Program Objective Code: BIMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 4/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Physics

Admission Program Objective Code: BIPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 5/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of

ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Computer Science

Admission Program Objective Code: CHCO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 6/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Earth Science

Admission Program Objective Code: CHEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 7/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Mathematics

Admission Program Objective Code: CHMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 8/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Physics

Admission Program Objective Code: CHPY
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 9/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer & Earth Sciences

Admission Program Objective Code: CMEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 10/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Math

Admission Program Objective Code: CMMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 11/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric

substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Physics

Admission Program Objective Code: CMPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 12/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Mathematics

Admission Program Objective Code: EAMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 13/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Physics

Admission Program Objective Code: EAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 14/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Mathematics & Physics

Admission Program Objective Code: MAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 15/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological/Biosystems Engineering

Admission Program Objective Code: BIBI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 144501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Biology, General

Admission Program Objective Code: BIOL
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, MDC, SPC, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biology, General - FSU - Teach

Admission Program Objective Code: BIOF
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular

growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic

compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biomedical Sciences

Admission Program Objective Code: BIMD
State CIP Code: 1192401010

Offered at FSCJ, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory

components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biomedical/Bioengineering

Admission Program Objective Code: BIEN
State CIP Code: 1192401010

Offered at FIU, FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biotechnology

Admission Program Objective Code: BITC
State CIP Code: 1192401010

Offered at FGSU, SFC, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Botany, General

Admission Program Objective Code: BOTA
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the

concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Business Administration

Admission Program Objective Code: BUSA
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business Administration & Management

Admission Program Objective Code: BUSM
State CIP Code: 1192401010

Offered at CC, FAMU, FAU, FGCU, FIU*, FSCJ, FSU*, IRSC, SPC, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be

emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Managerial Economics

Admission Program Objective Code: BMET
State CIP Code: 1192401010

Offered at UCF, UNF, USF*, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520601
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Marketing Management

Admission Program Objective Code: BMKT
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU*, FSU*, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521401
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Teacher Education/Business Technology Education

Admission Program Objective Code: BTEA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

- XXXXXXX - Elective in Business Administration*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business, General

Admission Program Objective Code: BUTN
State CIP Code: 1192401010

Offered at FSU*, UCF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Cardiopulmonary Science

Admission Program Objective Code: CARD
State CIP Code: 1192401010

Offered at FSWSC, VC*, FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510908
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- CGSX060 (required at FAMU only)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemical Engineering

Admission Program Objective Code: CHEN
State CIP Code: 1192401010

Offered at FIU, FAMU, FSU, USF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Chemical Sciences - Chemical Sciences

Admission Program Objective Code: CMSI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

AA Transfer Major: Chemical Sciences - FSU Teach

Admission Program Objective Code: CMST
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions,

applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemistry

Admission Program Objective Code: CHEM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Chemistry Teacher Education

Admission Program Objective Code: CHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Civil Engineering

Admission Program Objective Code: CIVI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UNF, FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Communication and Media Studies

Admission Program Objective Code: COMS
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090199
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Communications (Mass), Media Studies or Converged Communications

Admission Program Objective Code: COMM
State CIP Code: 1192401010

Offered at FGCU, FSCJ, UCF, UNF, USFSP, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090102
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health

Admission Program Objective Code: COMH
State CIP Code: 1192401010

Offered at FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512208
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health Liaison

Admission Program Objective Code: CMHL
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

- STAXXXX - Any course with the STA prefix

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

AA Transfer Major: Computational Biology

Admission Program Objective Code: BICP
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas,

volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

Transfer Major Physical Sciences Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computational Science

Admission Program Objective Code: CMPT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

- BSCXXXXC - Any lab course with the BSC prefix
  or
- CHMXXXXC - Any lab course with the CHM prefix
  or
- GLYXXXXC - Any lab course with the GLY prefix
  or
- METXXXXC - Any lab course with the MET prefix
  or
- PHYXXXXC - Any lab course with the PHY prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science

Admission Program Objective Code: CMIN
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- Choose two science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)
  *See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science (FSU only)

Admission Program Objective Code: CFSU
State CIP Code: 1192401010

Offered at FSU*
Transfer Program CIP code: 110101, track 2/6

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Science (UNF only)

Admission Program Objective Code: CUNF
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Technology

Admission Program Objective Code: CIIT
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- An introductory object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SPCXXXX - Any course with the SPC prefix

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science- Information Systems

Admission Program Objective Code: CIS
State CIP Code: 1192401010

Offered at FAMU, UF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - High level programming language course*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

or

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Criminology

Admission Program Objective Code: CMCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430116
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- COP2XXX - Any computer programming course*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

AA Transfer Major: Computer Engineering - Computer & Information Engineering

Admission Program Objective Code: CMPE
State CIP Code: 1192401010

Offered at FAMU, FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Engineering - Computer Engineering

Admission Program Objective Code: CMEN
State CIP Code: 1192401010

Offered at FAMU, UF, FAU, FIU, FSU, UCF, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 1/3
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Networking (BAS)

Admission Program Objective Code: CNET
State CIP Code: 1192401010

Offered at FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110901
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Science - BA in Computer Science (Track 6/6) (FSU)

Admission Program Objective Code: CMSC
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 6/6
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computer Software & Media Applications

Admission Program Objective Code: CSFM
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Construction Engineering

Admission Program Objective Code: CONS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Criminal Justice Studies

Admission Program Objective Code: CRIM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, PSC, UCF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Criminology

Admission Program Objective Code: CRMO
State CIP Code: 1192401010

Offered at UF*, USF, USFSM, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Dental Hygiene (BAS)

Admission Program Objective Code: DEHY
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510602
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Dietetics/Nutritional Services

Admission Program Objective Code: DIET
State CIP Code: 1192401010

Offered at FIU*, FSU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international

issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Dietetics/Nutritional Services - Dietetics

Admission Program Objective Code: DIEN
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Digital Media

Admission Program Objective Code: DGMD
State CIP Code: 1192401010

Offered at FSCJ, GCSC, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 100304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

Associate in Arts Degree or Associate in Science Degree in Graphics, Design, Digital Media, Information Technology or related fields.

AA Transfer Major: Drama Education

Admission Program Objective Code: DRAM
State CIP Code: 1192401010

Offered at FAMU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this

course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Economics - Business

Admission Program Objective Code: ECOB
State CIP Code: 1192401010

Offered at FAMU, FAU, UF, UNF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Economics - Social Sciences

Admission Program Objective Code: ECON
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU*, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 1/2
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Education of Blind & Visually Handicapped

Admission Program Objective Code: EDBL
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131009
*See note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Education, General

Admission Program Objective Code: EDTR
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Educational Studies

Admission Program Objective Code: EDST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 139999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

NOTE: Completion of this program does not result in educator certification.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Electrical, Electronics Engineering

Admission Program Objective Code: ELEL
State CIP Code: 1192401010

Offered at UF, FAMU, FAU, FSU, UCF, UNF, USF, FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141001, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Electronic Engineering Technology - Electrical & Computer Engineering Technology

Admission Program Objective Code: ELEC
State CIP Code: 1192401010

Offered at FAMU, VC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric

substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Elementary Teacher Education

Admission Program Objective Code: ELED
State CIP Code: 1192401010

Offered at CC, DSC, FAMU, FGCU, FSU*,FSWSC, NWFSC, PSC, SFSC, UCF, UF*, USF, USFSM, USFSP, UWF, FIU, FAU, SPC, IRSC, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131202
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Energy Technology Management (BAS)

Admission Program Objective Code: ENRG
State CIP Code: 1192401010

Offered at SCFMS

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements

for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Engineering Technology

Admission Program Objective Code: ENGN
State CIP Code: 1192401010

Offered at DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 159999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

AA Transfer Major: English Language and Literature

Admission Program Objective Code: ENLI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 230101
* See Note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: English Teacher Education

Admission Program Objective Code: ENTE
State CIP Code: 1192401010

Offered at CC, FAU, FSU, FSWSC, UCF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131305
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix
  or

- ENLXXXX - Any course with the ENL prefix

AA Transfer Major: Entomology

Admission Program Objective Code: ENTM
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260702
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Entrepreneurship

Admission Program Objective Code: ENTR
State CIP Code: 1192401010

Offered at USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Environmental Health Engineering

Admission Program Objective Code: ENVR
State CIP Code: 1192401010

Offered at FIU, FGCU, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Environmental Science

Admission Program Objective Code: ENVS
State CIP Code: 1192401010

Offered at FSU (BA only), UF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030104, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Environmental Science - Geography/Environmental Management

Admission Program Objective Code: ENVG
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130104, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FAU, UNF)

Admission Program Objective Code: EXFA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FGCU only)

Admission Program Objective Code: EXFG
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (USF only)

Admission Program Objective Code: EXUS
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and

inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Finance, General (BS) or Banking (BAS)

Admission Program Objective Code: FINB
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU*, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF, SPC (BAS)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520801
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial

records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the

activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences,

correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Financial Services

Admission Program Objective Code: FINS
State CIP Code: 1192401010

Offered at UNF, FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Fire and Emergency Services

Admission Program Objective Code: FRES
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430203
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Fire Science Management (BAS)

Admission Program Objective Code: FIR1
State CIP Code: 1192401010

Offered at FSCJ
Transfer Program CIP code: 430202

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Dietetics

Admission Program Objective Code: FSTD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Food Science

Admission Program Objective Code: FOOD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 1/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Foreign Language, Multiple

Admission Program Objective Code: FORG
State CIP Code: 1192401010

Offered at UCF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.*

*See Notes on Common Course Prerequisite Manual

AA Transfer Major: Forensic Science

Admission Program Objective Code: FORE
State CIP Code: 1192401010

Offered at FGCU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic

acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Forest Resources & Conservation - Wildlife Ecology & Conservation

Admission Program Objective Code: FORW
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: General Studies

Admission Program Objective Code: GENS
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology

Admission Program Objective Code: GEOT
State CIP Code: 1192401010

Offered at FAU, FIU, FSU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 400601, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and

climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology - Earth Science Teacher Education

Admission Program Objective Code: GEEA
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400601
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geomatics Engineering

Admission Program Objective Code: GEOE
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Geoscience - FSU Teach

Admission Program Objective Code: GEOS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Gerontology

Admission Program Objective Code: GERO
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 301101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Graphic Design

Admission Program Objective Code: GRPH
State CIP Code: 1192401010

Offered at FAMU, FSU*, UF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500409
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix

AA Transfer Major: Health and Physical Education, General - Exercise Science

Admission Program Objective Code: HPEE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health and Physical Education, General - Health, Leisure, and Fitness Studies

Admission Program Objective Code: HPEH
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health and Physical Education, General - Physical Education

Admission Program Objective Code: HPEP
State CIP Code: 1192401010

Offered at FAMU, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- 4 Credit hours in Skill Development Courses in Physical Activities
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Information Management

Admission Program Objective Code: HEIM
State CIP Code: 1192401010

Offered at FAMU, UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510706
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- CGSXXXX - Any course with the CGS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science (Track 5/7) (SSCF, FGCU)

Admission Program Objective Code: HESC
State CIP Code: 1192401010

Offered at FGCU, SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Community Health (Track 6/7) (UNF)

Admission Program Objective Code: HUNF
State CIP Code: 1192401010

Offered at UNF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Concentration in Physician Assistant Studies (Track 2/7) (MDC)

Admission Program Objective Code: HMDC
State CIP Code: 1192401010

Offered at MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Pre-Clinical/Pre-Physical Therapy (Track 3/7) (FAMU, UCF)

Admission Program Objective Code: HSPC
State CIP Code: 1192401010

Offered at FAMU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Services Administration

Admission Program Objective Code: HLSR
State CIP Code: 1192401010

Offered at SFC, FAMU, FAU, FGCU, FIU, IRSC, SCFMS, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Health Services Administration (BAS)

Admission Program Objective Code: HSAD
State CIP Code: 1192401010

Offered at EFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512211
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health Teacher Education (FSU)

Admission Program Objective Code: HTED
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131307
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: History

Admission Program Objective Code: HIST
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 540101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

AA Transfer Major: Honors College (FAU)

Admission Program Objective Code: HONB
State CIP Code: 1192401010

Offered at FAU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 2/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Honors College (NCF)

Admission Program Objective Code: HONA
State CIP Code: 1192401010

Offered at NCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 1/2
*See note in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FAU, FSU, UWF)

Admission Program Objective Code: HAMB
State CIP Code: 1192401010

Offered at FAU, FSU*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher
or

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FIU)

Admission Program Objective Code: HAMD
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (Track 1/4) (FIU, FSU, UCF)

Admission Program Objective Code: HAMA
State CIP Code: 1192401010

Offered at FIU, FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (USFSM)

Admission Program Objective Code: HAMC
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be

emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Human Resource Management

Admission Program Objective Code: HRMG
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Human Services

Admission Program Objective Code: HUSR

Offered at FSCJ, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Humanities

Admission Program Objective Code: HUMA
State CIP Code: 1192401010

Offered at FSU, UCF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Industrial & Systems Engineering

Admission Program Objective Code: INSY
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Industrial/Manufacturing Engineering

Admission Program Objective Code: INDS
State CIP Code: 1192401010

Offered at FAMU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Information Sciences and Studies - Computer Information Systems EN EIF

Admission Program Objective Code: INSC
State CIP Code: 1192401010

Offered at EFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (BC, FAMU, FIU, FSU, USF, UWF)

Admission Program Objective Code: INTB
State CIP Code: 1192401010

Offered at BC, FAMU, FIU, FSU, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 2/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)*
- COPXXXX - Any computer programming course*
- COPXXXX - COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
- MACXXXX Pre-Calculus course or Discrete Math
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (UCF, USFSM, DSC)

Admission Program Objective Code: INTA
State CIP Code: 1192401010

Offered at UCF, USF, USFSM, DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- PSYXXXX - Any course with the PSY prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)
- COP2XXX - Any computer programming course*
- PHYXXXX - Any course with the PHY prefix
- COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Insurance

Admission Program Objective Code: INSU
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interdisciplinary Studies

Admission Program Objective Code: INTE
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 309999
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and

properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interior Design (BAS)

Admission Program Objective Code: INDE
State CIP Code: 1192401010

Offered at SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500408, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International /Global Studies

Admission Program Objective Code: INTG
State CIP Code: 1192401010

Offered at UCF, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 302001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Business Management

Admission Program Objective Code: INTN
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, SCFMS, SPC, USF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Relations

Admission Program Objective Code: INTR
State CIP Code: 1192401010

Offered at FIU, FSU, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jewish Studies

Admission Program Objective Code: JWST
State CIP Code: 1192401010

Offered at FAU, FU
Transfer Program CIP code: 380206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Journalism

Admission Program Objective Code: JOUR
State CIP Code: 1192401010

Offered at UCF*, FAMU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Social Science Ed

Admission Program Objective Code: MTES
State CIP Code: 1192401010

Offered at UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  AND
- AMHXXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Special Ed

Admission Program Objective Code: MTSP
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade English Ed

Admission Program Objective Code: MTEN
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

- AMLXXXX - Any course with the AML prefix
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Science Ed

Admission Program Objective Code: MTMS
State CIP Code: 1192401010

Offered at NWFSC, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically

about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab

or

- METXXXXC - Any course with the MET prefix that includes a lab

or

- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Social Science Ed

Admission Program Objective Code: MTSS
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 4/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade English Ed

Admission Program Objective Code: MTSE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab

or

- METXXXXC - Any course with the MET prefix that includes a lab

or

- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade Social Science Ed

Admission Program Objective Code: MTSC
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix and a lab

or

- METXXXXC - Any course with the MET prefix and a lab

or

- OCEXXXXC - Any course with the OCE prefix and a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (FSU)

Admission Program Objective Code: LATA
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050134
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (UCF)

Admission Program Objective Code: LAAS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Assisting

Admission Program Objective Code: LEGA
State CIP Code: 1192401010

Offered at UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Studies, General (UCF)

Admission Program Objective Code: LEGL
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- No specific courses are required

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Liberal Arts & Sciences

Admission Program Objective Code: LIAS
State CIP Code: 1192401010

Offered at FAU, FIU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Linguistics

Admission Program Objective Code: LING
State CIP Code: 1192401010

Offered at FAU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- XXXXXXX - Demonstrated competency by testing or completion of a foriegn language through the intermediate level (SPN 2220 - Spanish III or ASL 2160 - American Sign Language III at NWFSC)*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management and Supervision (BAS - NWF)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(Also see Supervision and Management)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Info Systems - Business/Data Processing/Business Information Mgt

Admission Program Objective Code: MGIN
State CIP Code: 1192401010

Offered at FAU, FGCU, FSU*, SSCF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Science

Admission Program Objective Code: MGNT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Marine/Aquatic Biology

Admission Program Objective Code: MARI
State CIP Code: 1192401010

Offered at FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Marketing, Other - Advertising

Admission Program Objective Code: MARO
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521499
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows

operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Materials Engineering

Admission Program Objective Code: MATE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems,

mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Mathematics General - Mathematics General

Admission Program Objective Code: MATH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (Please check with your transfer institution for the appropriate course)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Jr. High/Middle School Mathematics Ed (NWF)

Admission Program Objective Code: MATN
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- MACXXXX - Any course with the MAC prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Secondary Mathematics Education

Admission Program Objective Code: MATR
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FSWSC, IRSC, UNF, USF, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

- MACXXXX - Any course with the MAC prefix
  or
- MTGXXXX - Any course with the MTG prefix
  or
- MASXXXX - Any course with the MAS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - FSU - Teach

Admission Program Objective Code: MFSU
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - Mathematics Teacher Education

Admission Program Objective Code: MFIU
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mechanical Engineering

Admission Program Objective Code: MECH
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FPU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems,

mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Medical Technology/Clinical Laboratory Sciences

Admission Program Objective Code: MEDC
State CIP Code: 1192401010

Offered at USF, SFC, FGCU, UCF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511005
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Meteorology - Meteorology

Admission Program Objective Code: METE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400401, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Microbiology/Bacteriology

Admission Program Objective Code: MCBA
State CIP Code: 1192401010

Offered at UCF, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied

point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Middle Eastern Studies

Admission Program Objective Code: MIDE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050108
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Motion Picture & Television Technology

Admission Program Objective Code: MOTP
State CIP Code: 1192401010

Offered at FSU*, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500602, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Multi-/Interdisciplinary Studies

Admission Program Objective Code: MULT
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300000
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Music Composition (FSU)

Admission Program Objective Code: MUCO
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500904
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix **4 Credit Hours**
- MV(K/S/V) XX1X (Applied Music course) **2-4 Credit Hours**
- MV(K/S/V) XX2X (Applied Music course) **2-4 Credit Hours**
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Performance (FGCU, FSU, UCF, UNF, USF, UWF)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500903
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7^{th} chords, augmented 6^{th} chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Studies (USF)

Admission Program Objective Code: MSTU
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 509999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of

analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General (FAMU, FAU, FSU*, UF*, FIU*) (Track 1/2)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU*, UF*, FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7^{th} chords, augmented 6^{th} chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nonprofit Management (UCF)

Admission Program Objective Code: NPRO
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nuclear Engineering

Admission Program Objective Code: NUCL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Nursing (Track 1/2)

Admission Program Objective Code: NRSN
State CIP Code: 1192401010

Offered at FAMU*, FAU*, FGCU*, FIU*, FSU*, UCF*, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, Track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nursing - AS to BS (NWF)

Admission Program Objective Code: NUR1
State CIP Code: 1192401010

Offered at BC, CC, CCF, DSC*, FAMU*, FAU*, FSCJ, FSWSC, GCSC, NWFSC, PBSC, PESC, PHSC, PSC, SCFMS, SFC, SFSC, IRSC, SPC, SJRSC, TCC, FGCU*, FIU*, FSU*, FGC, MDC, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Paralegal Studies (BAS)

Admission Program Objective Code: PLAA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302, 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Parks & Recreation Management

Admission Program Objective Code: PRKF
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

AA Transfer Major: Parks & Recreation Management - Hospitality, Recreation & Resort Management

Admission Program Objective Code: PRKH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Parks & Recreation Management - Instruction

Admission Program Objective Code: PKRE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 310301, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Parks & Recreation Management - Recreation and Tourism

Admission Program Objective Code: PRKT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the

individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Parks & Recreation Management - Recreation, Tourism & Events

Admission Program Objective Code: PRKR
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

AA Transfer Major: Pharmaceutical Science

Admission Program Objective Code: PHAR
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate

system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Pharmacy (Pharm D)

Admission Program Objective Code: PHAD
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512001
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy

Admission Program Objective Code: PHIL
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy and Religion

Admission Program Objective Code: PHRL
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 389999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Photonics Science and Engineering

Admission Program Objective Code: PHEN
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141003
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Education Teacher Education

Admission Program Objective Code: PHED
State CIP Code: 1192401010

Offered at FIU, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

or

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

- PELXXXX - 4-5 credit hours of courses with the PEL prefix
- PEMXXXX - 3 hours of courses with the PEM prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Science

Admission Program Objective Code: PHSC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physical Science - FSU Teach

Admission Program Objective Code: PHYT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physics

Admission Program Objective Code: PHYS
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physics Teacher Education

Admission Program Objective Code: PHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus,

area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Political Science & Government

Admission Program Objective Code: POTL
State CIP Code: 1192401010

Offered at FAU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Pre-Elementary/Early Childhood Teacher Ed - Age 3 through Grade 3

Admission Program Objective Code: ECHA
State CIP Code: 1192401010

Offered at CCF, FGC, FGCU, FSCJ, FSU*, MDC, NWFSC, PSC, SCFMS, SFC, SJRSC, UCF, UNF, UWF, SPC, USF, USFSM, FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131210
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Professional Communication

Admission Program Objective Code: PRCO
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090900
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Project Management (BAS - NWF)

Admission Program Objective Code: PROJ
State CIP Code: 1192401010

Offered at NWFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Psychobiology

Admission Program Objective Code: PSYB
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422706
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Psychology, General

Admission Program Objective Code: PSCH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 420101
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- One of the following Biology courses: BSC 1005, BSC 1010C, BSC 1011C, BSC 1080, BSC 1085C, BSC 1086C, BSC 2020C
  or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- One of the following Psychology courses: CLP 1001, CLP 2140, DEP 2004, DEP 2100

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Health (FGCU, USF)

Admission Program Objective Code: PUBH
State CIP Code: 1192401010

Offered at FGCU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is

an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Policy and Administration

Admission Program Objective Code: PUBP
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, IRSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Relations & Organizational Communication

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090902
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in

preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading

achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety and Security

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety Mgt (BAS) or Public Admin (BAS) or Public Safety/Homeland Security

Admission Program Objective Code: PBHL
State CIP Code: 1192401010

Offered at FAU, FSCJ, FSWSC, MDC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 439999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radio & TV Broadcasting

Admission Program Objective Code: RADO
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radiologic and Imaging Science

Admission Program Objective Code: RDTC
State CIP Code: 1192401010

Offered at VC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

> *To be admitted, a student must have current American Registry of Radiologic Technologists (ARRT) certification.**
>
> * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Real Estate

Admission Program Objective Code: REAL
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521501
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Religious Studies

Admission Program Objective Code: RELG
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Resort & Hospitality Management

Admission Program Objective Code: RSHO
State CIP Code: 1192401010

Offered at FGCU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520906
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Restaurant and Food Service Management

Admission Program Objective Code: REST
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Rhetorical Speech & Communication

Admission Program Objective Code: RHET
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 231304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Russian & East European Studies

Admission Program Objective Code: RUSS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050105
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Ed (BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC)

Admission Program Objective Code: SCIB
State CIP Code: 1192401010

Offered at BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131322
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEB
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 1/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Choose any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (DSC, MDC)

Admission Program Objective Code: SCIC
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131323
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEC
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 2/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to

have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Earth/Space Teacher Education

Admission Program Objective Code: STEE
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 3/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Middle Grades Science Teacher Education (NWF)

Admission Program Objective Code: MSCI
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 5/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Physics Teacher Education

Admission Program Objective Code: STEP
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Offered at DSC, MDC - CIP code 131329

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 4/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical

science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - English

Admission Program Objective Code: SETE
State CIP Code: 1192401010

Offered at UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

or

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - Social Science

Admission Program Objective Code: SESS
State CIP Code: 1192401010

Offered at FAMU, UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Biology Teacher Education (Track 4/6) (UCF)

Admission Program Objective Code: BTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Select one course from the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Select one course from the following:

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.
or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Chemistry Teacher Education (Track 5/6) (UCF)

Admission Program Objective Code: CTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

Select from the following groups of courses:

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered

if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Physics Teacher Education (Track 6/6) (UCF)

Admission Program Objective Code: PHYE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program

leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Secondary Mathematics Teacher Education (Track 3/6) (UCF)

Admission Program Objective Code: SMTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Select one course from the following:
MAC XXXX
or MTG XXXX
or MAS XXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Psychology

Admission Program Objective Code: SOPS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422707
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences Teacher Ed (History, Social Science, Economics, and Political Science)

Admission Program Objective Code: SSTE
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131317
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences, General

Admission Program Objective Code: SOSI
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, USF, USFSM, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- Choose any two AA General Education Social Science courses

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Work, General

Admission Program Objective Code: SOWR
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF*, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of

"C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Sociology

Admission Program Objective Code: SOCI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- Two Sociology courses - Choose from: SYG 2000, SYG 2010, SYG 2430

AA Transfer Major: Sociology - Anthropology

Admission Program Objective Code: SOAN
State CIP Code: 1192401010

Offered at FUI

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Spanish

Admission Program Objective Code: SPAN
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Special Education, General

Admission Program Objective Code: SPED
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF, SPC, IRSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Speech Communication and Rhetoric

Admission Program Objective Code: SPCO
State CIP Code: 1192401010

Offered at FAU, FIU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Speech Pathology & Audiology (FSU, UCF, UF, USF)

Admission Program Objective Code: SPCP
State CIP Code: 1192401010

Offered at FSU*, UCF, UF*, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course with the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology (USFSM)

Admission Program Objective Code: SPCU
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course the the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology - Deaf Studies Concentration

Admission Program Objective Code: SPCH
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Sport Management

Admission Program Objective Code: SPME
State CIP Code: 1192401010

Offered at FSU, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- MARXXXX - Any course with the MAR prefix
  or
- GEBXXXX - Any course with the GEB prefix

- MANXXXX - Any course with the MAN prefix
  or
- BULXXXX - Any course with the BUL prefix
  or
- CGSXXXX - Any course with the CGS prefix
  or
- STA 2023 - Statistics **4 Credit Hours**
  or
- ACGXXXX - Any course with the ACG prefix

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

or

- ECOXXXX - Any course with the ECO prefix (ECO 2013 or ECO 2023)

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Statistics

Admission Program Objective Code: STAT
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas,

volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- Two laboratory based science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art

Admission Program Objective Code: SDAR
State CIP Code: 1192401010

Offered at FAMU, FGCU,, FIU, FSU*, UCF, UF*, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARTXXXX - Two courses with the ART prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art - Graphic Design

Admission Program Objective Code: SDGD
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- ARHXXXX - Any course with the ARH prefix

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Supervision & Management (BAS), Organizational Mgt (BAS), Business & Org Mgt (BAS), Administration & Supervision (BAS), Spvr & Org Mgt (BAS) Mgt & Org Leadership (BAS)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(CIP 520299 is Management and Supervision at NWFSC)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Supply Chain Management (BAS)

Admission Program Objective Code: SUPP
State CIP Code: 1192401010

Offered at BC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520203, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Surveying

Admission Program Objective Code: SURV
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 151102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Sustainability and Built Environment

Admission Program Objective Code: SSBL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Sustainability Management - BAS

Admission Program Objective Code: SUST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Students with the following Associate in Science (AS) degrees will be admitted: Environmental Science Technology, Architectural Design & Construction Technology, Drafting and Design Technology or Engineering Technology.

Students who do not have one of the AS degrees listed will be required to take 15 credits in related coursework which mirrors coursework for SPC's AS in Environmental Science Technology degree requirements.

- The courses include: ARCXXXX, CHMXXXX, ECO 2013, ECO 2023, EETXXXX, ETM 1010C, ESCXXXX, EVRXXXX, GLYXXXX, GIS 1040C, OCEXXXX, PHYXXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Teacher Education, Multiple Levels (Track 1/3) (USFSP)

Admission Program Objective Code: TCHE
State CIP Code: 1192401010

Offered at USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Teacher Education, Multiple Levels - Art Education (Track 2/3) (UCF)

Admission Program Objective Code: ARTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General

Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

Select one course from the following:

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Technology Management (BAS)

Admission Program Objective Code: TCMG
State CIP Code: 1192401010

Offered at BC, FSCJ, GCSC, PBSC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 111099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

Admission into this BAS program requires an AS degree from a regionally-accredited institution in Computer Engineering Technology, Computer Information Technology, Computer Programming or Database Technology. Students with an AA degree, 60 credit hours but no degree, or an AS degree in another area may be admitted by the Dean on a case-by-case basis.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Tourism and Travel Services Management

Admission Program Objective Code: TOUR
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case

studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Trade & Industrial Teacher Ed (Vocational)

Admission Program Objective Code: TRAD
State CIP Code: 1192401010

Offered at FIU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131320
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- 15 hours in courses from the area of specialization*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Transportation Management

Admission Program Objective Code: TRAN
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520209
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Urban & Regional Planning

Admission Program Objective Code: URBA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Urban Design

Admission Program Objective Code: URDS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Veterinary Technology (BAS)

Admission Program Objective Code: VET
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510808
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Vocational Rehabilitation Counseling

Admission Program Objective Code: VOCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512310
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SYGXXXX - Any course with the SYG prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Women's Studies

Admission Program Objective Code: WOMN
State CIP Code: 1192401010

Offered at FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050207
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Zoology

Admission Program Objective Code: ZOO
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure,

evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Health Science (Track 1/7) (FAU, UF*, USF, USFSP, UWF)

Admission Program Objective Code: HSCI
State CIP Code: 1192401010

Offered at FAU, UF*, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select one course from the following:

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular

growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

or

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Interdisciplinary Medical Science (Track 7/7) (FSU)

Admission Program Objective Code: MESI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select from the following:

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General - Music Teacher Education (FIU*) (Track 2/2)

Admission Program Objective Code: MTEA
State CIP Code: 1192401010

Offered at FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of

analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AAS Degree

AAS Degree General Education Requirements

Associate in Applied Science Degree (AAS)

Associate of Applied Science Degree (AAS Degree)

The Associate of Applied Science degree is a two-year, non-transfer college credit curricula designed to prepare students for employment in various technical and semi-professional
fields. The A.A.S. degree consists of a minimum of 60 college credits, of which at least 18 are general education courses. Because the A.A.S. degree is not intended for transfer, the selection of general education and technical courses is broader and more flexible than that of the A.S. degree.

Graduation Requirements for A.A.S. Degree

A.A.S. degree students must satisfy the following requirements:

- Complete the A.A.S. general education courses as appropriate to the program of study, including Speaking-Across-the-Curriculum, Technology-Across-the-Curriculum, and minimum grade requirements.
- Complete at least fifteen credits of the technical core courses and technical elective courses specified in the degree program at NWF State College, unless there is an established articulation agreement.
- Complete at least 25% of the credits at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete A.A.S. General Education requirements.

Customizing an A.A.S. Degree to Meet a Specific Career Goal

In order to provide a student with the strongest technical background feasible, some technical courses within a given degree program may be adjusted to meet the student's targeted career goal. In these special cases, course substitutions may be approved upon request of the appropriate department chair to the Dean of Career and Technical Education.

Department: Applied Management

Associate in Applied Science

Applied Management (AAS)

Admission Program of Study Code APMG

State CIP Code 0552020107

The A.A.S. degree in Applied Management examines the ways in which management skills are used in a variety of businesses. Students interested in a broad range of technical fields will be able to prepare for leadership roles in the Business Management and Administration professions.

General Education

Select one course from each category; see the AAS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ LIN 1670 - LIN 1670 - Writing and Grammar or higher Communication Course **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ MAT 1033A - MAT 1033A - Intermediate Algebra Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage

and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 30 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today.

Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

____ ____ Other Approved College Credits (Requires Dept. Chair Approval)

Total Technical Elective Credits Required: 30

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Applied Management (AAS) - (XXXX)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MNA 1345 - Supervision I **3 Credit Hours**

Science General Education Course **3 Credit Hours**

Additional General Education Credits **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

MAN 2021 - Management **3 Credit Hours**

OST 2335 - Business Communications **3 Credit Hours**

Humanitites General Education Course **3 Credit Hours**

Social Science General Education **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

MAN 2300 - Personnel Management **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Program Hours: 60

AS Degrees and Certificates

- AS Degree General Education Requirements
- AS Degree Graduation Requirements
- AS Degree Program Information
- Certificate to AS Degree Career Paths
- Certificate and ATD Program Information
- Certificate and ATD Graduation Requirements

Associate in Science Degrees (AS) and Certificates

Associate in Science Degree (AS)

The Associate in Science degree provides students with college credit curricula designed to prepare them for employment in various semi-professional, technical, and supervisory fields. The A.S. degree programs include a minimum of 60 college credit hours, of which at least 18 are general education courses. The A.S. degree is not generally intended for transfer: however, many students eventually pursue upper division study after completing the A.S. degree. In recognition of this practice, the general education courses required for the A.S. degree meet all applicable Gordon Rule standards and minimum grade requirements; all are transferable as general education credits to upper division institutions in the Florida State University System. Many of the technical courses in the A.S. degree are also transferable, but students should work closely with an advisor in selecting technical courses if transfer is an eventual goal.

Companion Certificate Programs

Many of the technical certificate programs offered by NWF State College provide the initial step in meeting selected course requirements for an A.S. degree in a related area. Courses from those certificates are the same as or equivalent to comparable courses in the companion degree program. Likewise, courses used in the degree program may be applied to a certificate in a related area; in many cases, completion of the technical courses in the degree program can automatically qualify the student to receive the companion certificate.

Graduation Requirements for A.S. Degree

A.S. degree students must satisfy the following requirements:

- Complete the A.S. general education courses as appropriate to the program of study, including Speaking-Across-the-Curriculum, Technology-Across-the-Curriculum, minimum Gordon Rule course and minimum grade requirements.
- Complete at least fifteen credits of the technical core courses and technical elective courses specified in the degree program at NWF State College, unless there is an established articulation agreement.
- Complete at least 25% of the credits at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete AS Degree General Education Requirements (all Gordon Rule courses require a minimum grade of "C").

Customizing an A.S. to Meet a Specific Career Goal

In order to provide a student with the strongest technical background feasible, some technical courses within a given degree program may be adjusted to meet the student's targeted career goal. In these special cases, course substitutions may be approved upon request of the appropriate department chair to the Dean of Career and Technical Education.

College Credit Certificates (CCC)

College credit certificates range from eleven (11) to forty-two (42) credits in length, although most are comprised of thirty (30) credits, and require approximately one academic year to complete. Courses in these certificates include professional and technical skills, with an emphasis on practical application.

Each of the NWF State College credit certificates is paired with a companion A.S. degree program. Upon successful completion of the college credit certificate, the student may receive credit toward approximately 45% to 50% of the course requirements in the companion degree program. Conversely, students who successfully complete the technical credits within a companion degree program may qualify for graduation from the appropriate certificate program. In this manner, students may receive two graduation credentials from the college. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Career and Technical or Vocational Certificates (PSAV)

Career and technical or vocational certificates are comprised of clock hour courses and are designed to prepare students for direct entry into employment. The certificates are generally less than one year in length and are designed to prepare students for employment in selected occupational skill areas. The curriculum is heavily oriented toward problem solving and skill application. In certain circumstances, the skills acquired through completion of a career and technical or vocational certificate may be articulated into comparable college credit work and applied to college credit certificate, or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Graduation Requirements for Certificate

To successfully complete a college credit or a career and technical or vocational certificate, the student must meet the following requirements.

1. Complete the courses and other requirements as specified in the program of study. (With advance approval, college credit courses may be substituted for equivalent vocational courses in any career and technical or vocational certificate.)
2. Complete at least 25% of the certificate coursework in residence at Northwest Florida State College.
3. Maintain a cumulative GPA of not less than 2.00 in all coursework pursued for the certificate.
4. Satisfy all other college graduation requirements.

In addition, students wishing to complete a career and technical or vocational certificate must demonstrate minimum skill levels in reading, communications, and mathematics, as measured by the TABE. The levels vary for each program of study.

Certificate to AS Degree Career Paths

Many of the technical certificate programs offered by NWFSC provide the initial step in meeting selected course requirements for an A.S. degree in a related area. Courses from those certificates are the same as or equivalent to comparable courses in the companion degree program. Likewise, courses used in the degree program may be applied to a certificate in a related area; in many cases, completion of the technical courses in the degree program can automatically qualify the student to receive the companion certificate. Listed below are the NWFSC Associate in Science degrees and their companion certificates.

Accounting Technology

Associate in Science

Accounting Technology (AS)

Admission Program of Study Code ACCT
State CIP Code 1552030201

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Accounting Technology Management (CCC) (State CIP Code 0552030205).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 36

Technical Elective Courses

Select 6 credits from the following:

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Accounting Technology (AS) (ACCT)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours**

GEB 1011 - Introduction to Business **3 Credit Hours**

MTB 1103 - Business Mathematics **3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Humanities General Education **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ECO 2013 - Economics I **3 Credit Hours ♦**

ENC 2210 - Technical Report Writing **3 Credit Hours**

ACO 1806 - Payroll Accounting **3 Credit Hours**

Science General Education Course **3 Credit Hours**

Additional General Education Credits **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

ACG 2001 - Accounting I **3 Credit Hours**

BUL 2241 - Business Law I **3 Credit Hours**

Technical Elective **3 Credit Hours**

Social Science General Education **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 2011 - Accounting II **3 Credit Hours**

ACG 2450 - Computer Applications for Accounting **3 Credit Hours**

TAX 2000 - Federal Income Tax: Individual **3 Credit Hours**

ACG 2071 - Managerial Accounting **3 Credit Hours**

Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Accounting Technology Management (CCC)

Admission Program of Study Code AASA
State CIP Code 0552030205

Students who successfully complete this certificate may be eligible to receive credits towards the Accounting Technology (AS) degree (State CIP Code 1552030201).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to

management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the

activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 27

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Accounting Technology Management (CCC) (ACCM)
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** ACG 2450 - Computer Applications for Accounting **3 Credit Hours** ACG 2071 - Managerial Accounting **3 Credit Hours** ACO 1806 - Payroll Accounting **3 Credit Hours** TAX 2000 - Federal Income Tax: Individual **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 27

Architectural Design and Construction Technology

Associate in Science

Architectural Design & Construction Technology - Architectural Design Option (AS)

Admission Program Objective Code ARDO
State CIP Code 1604090100

The purpose of this program is to prepare students for employment as architectural drafters in the residential design and light commercial structures field.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**

- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Total Core Credits Required: 30

Technical Elective Courses

Select 18 credits from the following:

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

EGN 1130C - Descriptive Geometry

3 Credit Hours
(Fall, Spring, Summer)

Covers basic principles of orthographic projection, auxiliary views and rotation as they apply to points, lines and planes in space; addition of coplanar and non-coplanar vectors; intersections and developments; and selected abstract, exponometric and oblique projection, and practical problems.

Prerequisite(s): EGN 1111C or equivalent.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

Total Technical Elective Credits Required: 18

Total Program Credits Required: 66

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Architectural Design & Construction Technology - Architectural Design Option (AS) (ARDO)
First Year
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** BCN 1272 - Blueprint Reading for Commercial Construction **3 Credit Hours - Offered at Night Only** BCN 1230 - Building Construction Materials and Processes **3 Credit Hours - Offered at Night Only** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ETD 1320C - AutoCAD I **3 Credit Hours** EGN 1111C - Engineering Graphics **3 Credit Hours**

Technical Elective **3 Credit Hours**

General Education Course - **3 Credit Hours**

Total Semester Hours: 12

Summer Semester

ETD 1340C - AutoCAD II **3 Credit Hours**

ARC 2201 - Theory of Architecture **3 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours**

General Education Course **- 3 Credit Hours**

Total Semester Hours: 12

Second Year

Fall Semester

ARC 2303A - Design 2.1 **6 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

General Education Course **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

TAR 2121C - Architectural Drafting **3 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

General Education Course **- 4 Credit Hours**

Additional General Education Hours **- 2 Credit Hours**

Total Semester Hours: 15

Total Program Hours: 66

Architectural Design & Construction Technology - Construction Technology Option (AS)

Admission Program Objective Code ARCO
State CIP Code 1604090100

The purpose of this program is to prepare students for employment in the building construction field in the residential design and light commercial structures.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Total Core Credits Required: 30

Technical Elective Courses

Select 18 credits from the following:

BCN 1520 - Electrical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with electrical terminology, practices, methods, code requirements and safety and health in construction.

BCN 1567 - Plumbing and Gas Construction Practices

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with Plumbing and Gas code requirements, terminology, methods, practices, processes and safety and health used in building construction.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

BCN 2560 - Mechanical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with mechanical trades terminology, methods, practices, code requirements processes, and safety and health criteria in mechanical construction.

BCN 2721 - Construction Management/Planning

3 Credit Hours
(Fall, Spring, Summer)

The course covers project development and organization from pre-construction site investigation to final completion. The course will include the management of project estimates, plans, schedules, operations and safety. The student will become knowledgeable about documents used in the construction industry for bid, contracts, zoning, permits, bonds, loans specifications and drawings. Cost engineering, procurement, value engineering and quality assurance will be covered. Cost management through job cost analysis and purchase order systems will also be covered.

BCT 1763 - Construction Safety and Health

3 Credit Hours
(Fall, Spring, Summer)

A basic course in construction safety and health, covering such topics as: theories of accident causation; workplace hazards; hazard analysis and prevention; accident reporting; OSHA construction standard and safety practices; environmental safety; violence in the workplace; ergonomics; ethics and safety; workers' compensation; and stress on the job.

BCT 2761 - Structural Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with structural terminology, practices, methods, code requirements and safety, and health criteria in construction.

BCT 2770 - Construction Estimating

3 Credit Hours
(Fall, Spring)

A course in estimating as it relates to the construction industry covering references, estimating methods, take-off organization and presentation; material take-off, cost estimating in heavy construction, mathematical formulas for estimating, quantity take-off from plan review, and computer estimating overview.

Prerequisite(s): BCN 1230, BCN 1272.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 18

Total Program Credits Required: 66

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Architectural Design & Construction Technology - Construction Technology Option (AS) (ARCO)
First Year
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** BCN 1230 - Building Construction Materials and Processes **3 Credit Hours** - **Offered at Night Only** BCN 1272 - Blueprint Reading for Commercial Construction **3 Credit Hours - Offered at Night Only** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ETD 1320C - AutoCAD I **3 Credit Hours** Technical Elective **3 Credit Hours** EGN 1111C - Engineering Graphics **3 Credit Hours** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester ETD 1340C - AutoCAD II **3 Credit Hours** ARC 2201 - Theory of Architecture **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** General Education Course **- 3 Credit Hours** **Total Semester Hours: 12**
Second Year
Fall Semester

ARC 2303A - Design 2.1 **6 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester TAR 2121C - Architectural Drafting **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **4 Credit Hours** Additional General Education Hours **- 2 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 66

Business Administration

Associate in Science

Business Administration (AS)

Admission Program of Study Code BADM
State CIP Code 1552020102

Students who successfully complete selected courses from this program of study may be eligible to receive the Business Management (CCC) (State CIP Code 0552070101), Business Development and Entrepreneurship (CCC) (State CIP Code 0552070306), and/or Business Specialist (Marketing) (CCC) (State CIP Code 0552020103) college credit certificates.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**

- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral

reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students

and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Administration (AS) (BADM)
First Year
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours** ♦ ▲ ¶ Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** BUL 2241 - Business Law I **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours** ♦ Science General Education Course **3 Credit Hours** Additional General Education Hours **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester

MAN 2021 - Management **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ENC 2210 - Technical Report Writing **3 Credit Hours** ACG 2071 - Managerial Accounting **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Business Development and Entrepreneurship (CCC)

Admission Program of Study Code BMDE
State CIP Code 0552070306

Students who successfully complete this certificate may be eligible to receive credits towards the Business Administration (AS) degree (State CIP Code 1552020102).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ENT 2931 - Selected Studies in Entrepreneurship

1 Credit Hour
(Spring)

In this course, topics of current interest are presented in group instruction.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 25

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Development and Entrepreneurship (CCC) (Program Code Needed
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** GEB 2430 - Business Ethics **3 Credit Hours**

MAN 2021 - Management **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester BUL 2241 - Business Law I **3 Credit Hours** MAN 2300 - Personnel Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** SBM 2000 - Small Business Management **3 Credit Hours** ENT 2931 - Selected Studies in Entrepreneurship **1 Credit Hour** **Total Semester Hours: 13**
Total Program Hours: 25

Business Management (CCC)

Admission Program of Study Code BMGC
State CIP Code 0552070101

Students who successfully complete this certificate may be eligible to receive credits toward the Business Administration (AS) degree (CIP Code 1552020102).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management,

presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 12 credits from the following:

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Management (CCC) (BMGC)
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours**

GEB 1011 - Introduction to Business **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 24

Business Specialist (Marketing) (CCC)

Admission Program of Study Code BUSS
State CIP Code 0552020103

Students who successfully complete this certificate may be eligible to receive credits toward the Business Administration (AS) degree (CIP Code 1552020102).

Core Courses

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Specialist (Marketing) (CCC) (BUSS)
Fall Semester MAR 2011 - Introduction to Marketing **3 Credit Hours** MKA 2021 - Professional Selling **3 Credit Hours** **Total Semester Hours: 6** **Spring Semester** MKA 2041 - Retail Management **3 Credit Hours** MKA 2511 - Introduction to Advertising **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 12

Computer Engineering Technology

Associate in Science

Computer Engineering Technology (AS)

Admission Program of Study Code CENG
State CIP Code 1615120100

Students who successfully complete selected courses from this program of study may be eligible to receive the Microcomputer Repairer/Installer (CCC) (State CIP Code 0647010406) college credit certificate.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2143C - CompTIA Server+

3 Credit Hours
(Spring)

This course provides advanced concepts in server hardware components and troubleshooting in a non-vendor-specific environment. Introduction to server installation, server storage concepts, administering services, server roles, virtualization, performance monitoring, security, data protection, and maintenance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2941 - Computer Engineering Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2942 - Computer Engineering Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if

applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

- COP 2XXX- Any Computer Programming Course **3 Credit Hours**

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Engineering Technology (AS) (CENG)
First Year
Fall Semester CIS 1000 - Introduction to Computer Science **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2143C - CompTIA Server+ **3 Credit Hours** Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**

Second Year
Fall Semester CTS 1156C - Desktop Support **3 Credit Hours** COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CET 2660 - Network Security **3 Credit Hours** Social Science General Education **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester Technical Elective **2 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Microcomputer Repairer/Installer (CCC)

Admission Program of Study Code MCCR
State CIP Code 0647010406

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Engineering Technology (AS) degree (State CIP Code 161520100).

Core Courses

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include

disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Microcomputer Repair/Installer (CCC) (MCCR)
Fall Semester CET 2179C - PC Operating Systems A+ **3 Credit Hours** CTS 1156C - Desktop Support **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 9** **Spring Semester** CET 2660 - Network Security **3 Credit Hours** CET 2182C - PC Hardware A+ **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 15

Computer Programming and Analysis

Associate in Science

Computer Programming and Analysis (AS)

Admission Program Objective Code CPRO
State CIP Code 1511020101

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Computer Programmer (CCC) (State CIP Code 0511020200) and/or Computer Programming Specialist (CCC) (State CIP Code 0511020103).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Science **3 Credit Hours**
- ____ ____ Social Science **3 Credit Hours**
- ____ ____ General Education Electives **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programming and Analysis (AS) (CPRO)	Companion Certificates*

First Year	CMPG	CMPS
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√
Spring Semester COP 2220 - Programming in C **3 Credit Hours** COP 2224 - Programming in C++ **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** MAD 2104 - Introduction to Discrete Mathematics **3 Credit Hours** Science General Education Course **3 Credit Hours** **Total Semester Hours: 15**	√ √ √	 √ √
Second Year		
Fall Semester CGS 2820 - Web Design **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**	√	√
Spring Semester COP 2010 - Visual Basic Programming **3 Credit Hours** COP 2228 - Advanced Programming in C++ **3 Credit Hours**	√	

COP 2700 - Introduction to SQL **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: CMPG - Computer Programmer (CCC) CMPS - Computer Programming Specialist (CCC)		

College Credit Certificate

Computer Programmer (CCC)

Admission Program of Study Code CMPG
State CIP Code 0511020200

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Programming and Analysis (AS) degree (State CIP Code 1511020101).

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 12 credits from the following:

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 33

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programmer (CCC) (CMPG)
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester COP 2220 - Programming in C **3 Credit Hours** COP 2010 - Visual Basic Programming **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** COP 2700 - Introduction to SQL **3 Credit Hours** COP 2224 - Programming in C++ **3 Credit Hours** **Total Semester Hours: 15**
Summer Semester COP 2805 - Advanced Java Programming **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**

Total Program Hours: 33

Computer Programming Specialist (CCC)

Admission Program of Study Code CMPS
State CIP Code 0511020103

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Programming and Analysis (AS) degree (State CIP Code 1511020101).

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 12

Technical Elective Courses

Select 6 credits from the following:

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programming Specialist (CCC) (CMPS)
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester COP 2224 - Programming in C++ **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours**

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 18

Criminal Justice Technology

Associate in Science

Criminal Justice Technology (AS)

Admission Program of Study Code CJTC
State CIP Code 1743010302

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- PSY 2012 Psychology **3 Credit Hours** ♦
- SYG 2000 Sociology **3 Credit Hours** ♦ ❖

Total General Education Credits Required: 18

Core Courses

CCJ 1010 - Introduction to Criminology

3 Credit Hours
(Spring)

A study of the nature and causes of crime and delinquency; the development of delinquent and criminal behavior; theory development in criminology, crime rates and trends, victimology and particular crime pattern areas.

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CJC 2000 - Introduction to Corrections

3 Credit Hours
(Fall)

Theories of punishment and incarceration; the organization of correction programs and institutions, principles of probation and parole, role of parole and probation officers, legal implications; and problems of rehabilitation are covered. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJE 2300 - Police Administration and Organization

3 Credit Hours
(Fall, Spring, Summer)

This course presents the principles of organization and administration in law enforcement including functions and activities, planning and research, public relations, personnel and training, inspection and control, records and communications and custody.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CCJ 1941 - Internship – Criminal Justice

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Permission of the instructor

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CCJ 2509 - Introduction to Gangs and Crime

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of street gangs, the social factors, and the general classifications necessary for the law enforcement, corrections, and public safety professional. This course explores the history, membership, activity, current trends, and influence of street gangs. Students will be challenged to define community-based solutions and strategies to combat the criminal activity associated with street gangs.

CCJ 2934 - Special Topics in Criminal Justice

2 Credit Hours
(Fall, Spring, Summer)

This course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

*This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CJE 1642C - Introduction to Crime Scene Technology

3 Credit Hours
(Fall, Spring, Summer)

This course explains and discusses the principals and theories in crime scene technology. The course covers specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence, gunshot residue, blood splatter and bodies.

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2330 - Ethics in Criminal Justice

3 Credit Hours
(Fall, Spring, Summer)

This course is a detailed exploration of ethical issues in Criminal justice with special emphasis on morality and the law, human behavior, and ethical decision making in law enforcement, corrections and the courts.

CJE 2400 - Police and Community Relations

3 Credit Hours
(Fall, Spring, Summer)

A study of the relationship of the Justice Administration agencies to the surrounding community. Examines the effect of social change and the consequences that it produces upon law enforcement, corrections, and the courts.

CJE 2600 - Criminal Investigations

3 Credit Hours
(Offered as needed)

Fundamentals of investigation; duties and responsibilities of the detective; interrogation techniques; search and techniques of protecting the crime scene; collection and preservation of evidence; modus operandi systems; scientific aids and other sources of information; court preparation and case follow-up.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

CJJ 1002 - Juvenile Delinquency

3 Credit Hours
(Offered as needed)

A study of the nature and cause of juvenile delinquency, the development of the delinquent and criminal behavior, specific criminal justice subsystem (law enforcement, judicial, corrections) problems dealing with juvenile delinquents from initial contact through final disposition and treatment. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJL 2130 - Criminal Evidence and Procedure

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of criminal procedure particularly applied to search and seizure and evaluation of evidence.

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Criminal Justice Technology (AS) (CJTC)
First Year
Fall Semester CCJ 1020 - Introduction to Criminal Justice **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours** Technical elective **3 Credit Hours** Technical elective **3 Credit Hours** **Semester Total Hours: 15**
Spring Semester CCJ 1010 - Introduction to Criminology **3 Credit Hours** CJC 2000 - Introduction to Corrections **3 Credit Hours** PSY 2012 - Psychology **3 Credit Hours ♦** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Second Year
Fall Semester CJL 1100 - Criminal Law **3 Credit Hours**

CJL 2500 - Courts and the Judicial Process **3 Credit Hours** SYG 2000 - Sociology **3 Credit Hours** ❖ ♦ Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Spring Semester CJE 2300 - Police Administration and Organization **3 Credit Hours** CJJ 1002 - Juvenile Delinquency **3 Credit Hours** CJL 1400 - Criminal Procedure **3 Credit Hours** Natural Sciences **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Total Program Hours: 60

Vocational Certificate

Auxiliary Law Enforcement Officer Basic (PSAV)

Admission Program of Study Code LEAY
State CIP Code 0743010701

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the

awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 333

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Auxiliary Law Enforcement Officer Basic (PSAV) (LEAY)
Fall Semester CJK 0240 - Law Enforcement Auxiliary Introduction **27 Clock Hours** CJK 0241 - Law Enforcement Auxiliary Patrol and Traffic **21 Clock Hours** CJK 0242 - Law Enforcement Auxiliary Investigations **18 Clock Hours** CJK 0422 - Dart-Firing Stun Gun **9 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0020 - Law Enforcement CMS Vehicle Operations **48 Clock Hours** **Total Semester Clock Hours: 333**

Total Program Clock Hours: 333

Correctional Officer (Basic) (PSAV)

Admission Program of Study Code CORR
State CIP Code 0743010200

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0300 - Introduction to Corrections

33 Clock Hours
(Offered as needed)

This course introduces students to the legal and ethical responsibilities of a correctional officer. Legal terms and definitions are explained. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0305 - CJSTC Communications

42 Clock Hours
(Offered as needed)

This course covers the entire report writing process. Topics include interview and interrogation, interpersonal communication, and practical exercises. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0310 - Officer Safety

12 Clock Hours
(Offered as needed)

Correctional officer safety procedures are learned. Students will learn to identify potential hazards and learn how to safely respond. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0315 - Facility and Equipment

12 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for inspecting a correctional facility and equipment. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0320 - Intake and Release

18 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for admitting and releasing inmates in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0325 - Supervising in a Correctional Facility

42 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for supervising inmates in a correctional facility. They also learn to detect crimes and rule violations in various correctional facility settings. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0330 - Supervising Special Populations

21 Clock Hours
(Offered as needed)

Students learn how to identify and supervise special population groups, such as threat groups, juveniles, elderly, and mentally ill inmates. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0335 - Responding to Incidents and Emergencies

18 Clock Hours
(Offered as needed)

Students learn how to identify and respond to situations involving escapes, riots, bomb threats, fires, and medical emergencies in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing

range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0340 - Corrections PSAV Physical Fitness

30 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 438

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Correctional Officer (Basic) (PSAV) (CORR)

Fall Semester CJK 0300 - Introduction to Corrections **33 Clock Hours** CJK 0305 - CJSTC Communications **42 Clock Hours** CJK 0310 - Officer Safety **12 Clock Hours** CJK 0315 - Facility and Equipment **12 Clock Hours** CJK 0320 - Intake and Release **18 Clock Hours** CJK 0325 - Supervising in a Correctional Facility **42 Clock Hours** CJK 0330 - Supervising Special Populations **21 Clock Hours** CJK 0335 - Responding to Incidents and Emergencies **18 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0340 - Corrections PSAV Physical Fitness **30 Clock Hours** **Total Semester Clock Hours: 438**
Total Program Clock Hours: 438

Law Enforcement Officer (Basic) (PSAV)

Admission Program of Study Code LEOB
State CIP Code 0743010700

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0001 - Introduction to Law Enforcement

12 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to law enforcement, the process for becoming a certified law enforcement officer, and the requirements of the academy program. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0012 - Legal

63 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to the criminal justice system, the chain-of-command system in law enforcement, Constitutional Law, Florida Statutes, and the Police Code of Ethics. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0013 - Interactions in a Diverse Community

42 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enhance student awareness and understanding of human diversity issues and to teach students skills to enable them to effectively interact with people of diverse backgrounds. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0014 - Interviewing and Report Writing

54 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to help the student learn vital communication skills including interviewing, note-taking, statement taking, and report writing. It also helps the student to develop survival skills, stress management skills, and problem solving skills utilizing the SECURE model. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

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CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0064 - Fundamentals of Patrol

36 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to understand Community Oriented Policing and how it is implemented as a problem solving model, and identify the SECURE problem solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, maintain mental and physical fitness; respond to a call, approach a suspect, make an arrest, transport a prisoner and process the prisoner at a detention facility; and understand how to direct traffic, how to enforce traffic citations, identify how to respond to alarms and conduct a building search, and search inventory and impound vehicles. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0065 - Calls for Service

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to respond to calls for service, disturbances, people in distress and court orders. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0077 - Criminal Investigations

51 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond appropriately to a person or property crime victim, witness, and suspect; conduct a preliminary investigation on crimes against persons and crimes against property offenses; conduct a follow-up investigation to establish a suspect's identity and/or ascertain facts of the case; and, give testimony in different types of court proceedings. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0078 - Crime Scene to Courtroom

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond to a crime scene, protect and survey a crime scene, process a crime scene, dust for latent prints, and document a crime scene by sketching. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0084 - DUI Traffic Stops

33 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective DUI stops, including identifying a driver under the influence of alcohol and drugs, conducting field sobriety tests, and completing a DUI investigation. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0087 - Traffic Stops

30 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective traffic stops, including ethical consideration, safety considerations, citation and warning procedures, and dealing with abandoned vehicles. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0088 - Traffic Crash Investigations

33 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0092 - Critical Incidents

45 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to identify the crowd control procedures to safely and effectively disperse or control a large group of people; understand local emergency response plans; respond to a bomb threat, assesses the scene, search and evacuate a building or suspected bomb sight, identify Weapons of Mass Destruction and properly respond to a WMD incident. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0096A - Criminal Justice Physical Fitness I

31 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0096B - Criminal Justice Physical Fitness II

32 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 801

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Law Enforcement Officer (Basic) (PSAV) LEOB)

Fall Semester

CJK 0001 - Introduction to Law Enforcement **12 Clock Hours**

CJK 0012 - Legal **63 Clock Hours**

CJK 0013 - Interactions in a Diverse Community **42 Clock Hours**

CJK 0014 - Interviewing and Report Writing **54 Clock Hours**

CJK 0064 - Fundamentals of Patrol **36 Clock Hours**

CJK 0065 - Calls for Service **36 Clock Hours**

CJK 0077 - Criminal Investigations **51 Clock Hours**

CJK 0078 - Crime Scene to Courtroom **36 Clock Hours**

CJK 0020 - Law Enforcement CMS Vehicle Operations **48 Clock Hours**

CJK 0040 - CMS Firearms **81 Clock Hours**

CJK 0096A - Criminal Justice Physical Fitness I **31 Clock Hours**

CJK 0096B - Criminal Justice Physical Fitness II **32 Clock Hours**

CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours**

Total Semester Clock Hours: 549

Spring Semester

CJK 0092 - Critical Incidents **45 Clock Hours**

CJK 0087 - Traffic Stops **30 Clock Hours**

CJK 0084 - DUI Traffic Stops **33 Clock Hours**

CJK 0088 - Traffic Crash Investigations **33 Clock Hours**

CJK 0051 - Defensive Tactics **81 Clock Hours**

CJK 0422 - Dart-Firing Stun Gun **9 Clock Hours**

CJK 0096C - Criminal Justice Physical Fitness III **21 Clock Hours**

Total Semester Clock Hours: 252

Total Program Clock Hours: 801

Customer Relationship Management

Associate in Science

Customer Relationship Management (AS)

Admission Program Objective Code CUST
State CIP Code 1252020700

Pending Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) approval, this program will no longer be admitting new students beginning with the Spring 2019 semester.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Total Core Credits Required: 30

Technical Elective Courses

Select 12 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

(can be completed two times for credit)

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Customer Relationship Management (AS) (CUST)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** GEB 1011 - Introduction to Business **3 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester OST 2401 - General Office Management **3 Credit Hours** Mathematics General Education **3 Credit Hours** Natural Science General Education **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester GEB 2430 - Business Ethics **3 Credit Hours** MAR 2011 - Introduction to Marketing **3 Credit Hours** MNA 1161 - Customer Service **3 Credit Hours** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours**

Total Semester Hours: 15
Spring Semester MNA 2100 - Organizational Behavior **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** ENC 2210 - Technical Report Writing **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Cyber Security

Associate in Science

Cyber Security (AS)

Admission Program Objective Code CYBE
State CIP Code 1511100307

Students who successfully complete selected courses from this program of study may be eligible to receive the Database and E-Commerce Security (CCC) certificate (State CIP Code 0511100311).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases

and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Cyber Security (AS) (CYBE)
First Year
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CGS 2541 - Introduction to Database Concepts **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 2880C - Digital Forensics Fundamentals **3 Credit Hours** CTS 1106 - Fundamentals of UNIX **3 Credit Hours** Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester CTS 2314C - Network Defense and Countermeasures **3 Credit Hours** CIS 2352C - Ethical Hacking Fundamentals **3 Credit Hours** Social Science General Education **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Database and E-Commerce Security (CCC)

Admission Program Objective Code DECS
State CIP Code 0511100311

Students who successfully complete this certificate may be eligible to receive credits towards the Cyber Security (AS) degree (State CIP Code 1511100307).

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 15

Technical Elective Courses

Select 3 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1843 - Introduction to E-Commerce

3 Credit Hours
(Offered as needed)

This course is designed to provide students with an overview of the dynamics of electronic commerce and how it links information technology to business objectives. Course may not transfer to all State University System institutions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 3

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Database and E-Commerce Security (CCC) (DECS)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CGS 2541 - Introduction to Database Concepts **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Dental Assisting

Vocational Certificate

Dental Assisting (PSAV)

Admission Program of Study Code DENT
State CIP Code 0351060112

Basic Skills Requirements: The student must be exempt or attain a **10th grade level** on each section of the TABE exam: Math, Language and Reading.

This program is a Limited Admission program subject to additional program policies and requirements stipulated in the "Dental Assisting Student Handbook." The admission criteria and process, as well as some course numbers and credits are subject to change; students should contact the Dental Assisting program office for the most current information.

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted accreditation status of approval without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: http://www.ada.org/100.aspx.

Students who successfully complete this program and pass the Dental Assisting National Board (DANB) Certificate (CDA) may apply 21 credits towards the Technical Elective requirements for the Health Services Management (AS) degree (State CIP Code 135070100).

Core Courses

DEA 0020 - Pre-Clinical Procedures Theory

60 Clock Hours
(Offered as needed)

This course is designed to provide an introduction to the dental assisting profession to include orientation to four handed dentistry and general dental office procedures including, but not limited to basic principles of disease prevention, patient data collection and assessment, and instrumentation. Emphasis is on adhering to safety guidelines as specified by OSHA.

Corequisite(s): DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DEA 0020L - Pre-Clinical Practice Lab

90 Clock Hours
(Offered as needed)

This is a comprehensive chair side competency based course. The course provides the skills practice necessary for dental assisting students entering four handed dentistry practice including but not limited to infection control, taking and recording vital signs, assisting with operative procedures, principles of preventive dentistry, instrument identification, and use and maintenance of equipment. Emphasis is on aseptic technique and clinical competency with procedures performed in a contemporary dental practice.

Corequisite(s): DEA 0020, DES 0103L.

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DEA 0130 - Oral Pathology

30 Clock Hours
(Offered as needed)

This course is a general study of the scientific and clinical concepts that include additional knowledge base necessary to the practice of dental assisting. Students will study the normal and abnormal conditions of the oral cavity such as dental caries prevention, the dental caries process and recognition of various common pathological conditions. Oral pathology, histology and embryology are included. Emphasis is on the interrelationship of the information presented with the clinical practice of dental assisting.

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DEA 0803L - Clinical Practice I

150 Clock Hours
(Offered as needed)

This competency based clinical course provides a real world setting in which to integrate the laboratory and clinical skills learned in the classroom. The student receives closely supervised hands on training in chair side dental assisting through rotations at community dental offices. Progress is evaluated using predetermined competency guidelines. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 90 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Corequisite(s): DEA 0020, DEA 0020L.

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DES 0830 - Expanded Function Theory

30 Clock Hours
(Offered as needed)

This course introduces the dental assisting student to the dental specialty practices and more advanced clinical skills. It also provides the theory of dental specialty practice administration as it relates to the role of the dental assistant including ethical and legal ramifications. Lectures relate topics including but not limited to dental specialty procedures, instruments used in the specialty practices and duties delegated to dental assistants according to the rules and regulations of the Florida Dental Practice Act. Role playing and problem solving activities using case studies relate to duties delegated to dental assistants.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830L.

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DES 0830L - Expanded Functions Lab

60 Clock Hours
(Offered as needed)

This laboratory course accompanies the clinical practice lecture course DES 0830 and provides opportunity for students to practice application of the duties delegated to dental assistants according to the Florida Dental Practice Act. Students become more proficient in more advanced skills. Competencies containing information and behavioral objectives allow students to master each skill before advancing to the next.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830.

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DEA 0852L - Clinical Practice II

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice I. It provides a real world setting for students to receive additional training in the clinical skills learned in class. Students are assigned to various offices in the community including but not limited to general dentists, oral surgeons, orthodontists, periodontists, and endodontists. Performance evaluations are utilized to measure competency and provide feedback from the local dental offices to the instructor regarding the students' competency level. Skills are strengthened in Seminar Lab. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 150 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DES 0400

Corequisite(s): DES 0830, DES 0830L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DEA 0936 - Dental Assisting Seminar

60 Clock Hours
(Offered as needed)

This course is designed to provide a review of materials commonly covered on the Dental Assisting National Board (DANB) Exam. Topics include but are not limited to infection control, general chair side procedures, and radiographic technique. The seminar will provide a mock board examination, and opportunities for review, problem solving, and strengthening skills. The course also serves as an opportunity for feedback from students' Clinical Practice.

Prerequisite(s): DEA 0852L, DEA 0803L, DES 0205, DES 0205L

Corequisite(s): DEA 0803L, DES 0206L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0103 - Dental Materials

60 Clock Hours
(Offered as needed)

This course is a comprehensive study of the theory of manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. The competency based lab that accompanies this course includes exercises to illustrate application and use of selected materials. Students will study various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, as well as acrylic plastics. Students will become familiar with various pieces of dental laboratory equipment and their uses.

Corequisite(s): DES 0103L, DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0103L - Dental Materials Lab

90 Clock Hours
(Offered as needed)

This course is a comprehensive study of the manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. Emphasis is on practical application as it relates to the role of the dental assistant in the contemporary dental practice. It is a competency based lab that accompanies the theory course and includes exercises to illustrate application and uses of selected materials. Students practice the use of various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, and acrylic plastics.

Corequisite(s): DES 0103, DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0205 - Dental Radiology Lecture

60 Clock Hours
(Offered as needed)

This course is designed to introduce the theory, application and principles of radiographic exposure and processing techniques used in dentistry. Students will receive instruction including but not limited to historical data, radiation safety, exposure, processing, mounting and error prevention. Image interpretation of radiographic anatomical

structures will be included.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0205L - Dental Radiology Laboratory I

60 Clock Hours
(Offered as needed)

This laboratory course assists students in radiographic performance techniques using DXTR manikins to achieve competency prior to exposure of various patients with varied dentitions. Students practice exposing, mounting, radiographic interpretation, safe darkroom procedures, identification of landmarks and distinguishing radiographic pathology from normal landmarks. Clinical radiographic skills necessary to produce diagnostic quality radiographs including bitewings, periapical radiographs, and panoramic x-rays will be covered. Emphasis is on patient and operator safety guidelines and producing diagnostic quality radiographs.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205.

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DES 0206L - Dental Radiology Laboratory II

60 Clock Hours
(Offered as needed)

This laboratory course assists students in additional radiographic performance techniques to include surveys on patients with varied dentitions. Students practice more advanced radiographic exposure techniques, interpretation, additional darkroom procedures, identification of landmarks and distinguishing various radiographic pathology. Clinical radiographic skills necessary to produce diagnostic quality x-rays including but not limited to bitewings, periapical radiographs, and panoramic surveys on actual patients will be covered. Emphasis is placed on patient and operator safety guidelines and producing diagnostic quality radiographs during this course.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L, DES 0205L

Corequisite(s): DEA 0851L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0324 - Interpersonal Communications Skills

30 Clock Hours
(Offered as needed)

This course is designed to implement interpersonal and effective communication skills in the practice of dentistry. It includes team building strategies, oral and written communications skills with the correct use of terminology commonly used in dentistry. Professionalism in verbal and nonverbal communications is emphasized. Students will be introduced to the legal and ethical scope of responsibilities for dental assistants and interpersonal relations in the dental office. Providing oral health instructions and post operative instructions for patients will be introduced. Scenario-based role playing is used to augment student learning of course content.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0400 - Dental Anatomy

90 Clock Hours
(Offered as needed)

This course provides a detailed study of the orofacial and related structures of the head and neck including, but not limited to the eruption, identification and function of the human dentition, study of bony, circulatory, muscular and nervous systems of the head, neck and surrounding structures associated with the oral cavity. A brief introduction to oral histology and embryology will be included.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0501 - Dental Practice Management

60 Clock Hours
(Offered as needed)

This course includes theory and content relating to practical administrative duties performed in the dental office. Lectures and role playing activities are related to the responsibilities of the dental assistant. Topics include but are not limited to appointment scheduling, billing, collections, record keeping, clerical and dental supply inventory. Students are introduced to the use of dental practice software with hands on computer experience. Legal responsibilities, interpersonal relations, and interview skills are included.

Prerequisite(s): DES 0205, DES 0205L

Corequisite(s): DEA 0936.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0602 - Pharmacology and Dental Office Emergencies

30 Clock Hours
(Offered as needed)

This course is designed to familiarize the dental assisting student with the basic concepts and considerations regarding pharmacology and pharmaceutics used in dentistry. Topics presented include nitrous oxide monitoring, emergency procedures and protocol. Lectures will include recognition of emergency conditions in the dental office, not limited to syncope, anaphylaxis, and cardiovascular incidents. Emphasis is placed on the role of the dental assistant in the prevention and management of dental office emergencies.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0844 - Infection Control for Dental Assistants

30 Clock Hours
(Offered as needed)

This course is a general study in biomedical sciences of preventive dentistry to familiarize the dental assisting student with basic principles of microbiology, basic body structures, and their functions and effects as manifested in the oral cavity. The course also covers the effects of nutrition and the role of microorganisms in dental health and blood borne pathogens.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 1230

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Dental Assisting (PSAV) (DENT)
Fall Semester DEA 0020 - Pre-Clinical Procedures Theory **60 Clock Hours**

DEA 0020L - Pre-Clinical Practice Lab **90 Clock Hours**

DES 0400 - Dental Anatomy **90 Clock Hours**

DES 0103 - Dental Materials **60 Clock Hours**

DES 0103L - Dental Materials Lab **90 Clock Hours**

DEA 0803L - Clinical Practice I **150 Clock Hours**

DES 0324 - Interpersonal Communications Skills **30 Clock Hours**

DES 0844 - Infection Control for Dental Assistants **30 Clock Hours ***

Total Semester Clock Hours: 450

Spring Semester

DES 0830 - Expanded Function Theory **30 Clock Hours**

DES 0602 - Pharmacology and Dental Office Emergencies **30 Clock Hours**

DES 0830L - Expanded Functions Lab **60 Clock Hours**

DEA 0852L - Clinical Practice II **180 Clock Hours**

DES 0205 - Dental Radiology Lecture **60 Clock Hours**

DES 0205L - Dental Radiology Laboratory I **60 Clock Hours**

DEA 0130 - Oral Pathology **30 Clock Hours**

Total Semester Clock Hours: 420

Summer Semester

DEA 0851L - Clinical Practice III **180 Clock Hours**

DES 0501 - Dental Practice Management **60 Clock Hours**

DEA 0936 - Dental Assisting Seminar **60 Clock Hours**

DES 0206L - Dental Radiology Laboratory II **60 Clock Hours**

Total Semester Clock Hours: 360

Total Program Clock Hours: 1230

* DES0844 may be taken in Fall or Spring Semester

Digital Media/Multimedia Technology

Associate in Science

Digital Media/Multimedia Technology (AS)

Admission Program Objective Code DMMT
State CIP Code 1611080103

The Digital Media/Multimedia programs are intended for students interested in working in commercial art fields that include electronic publishing, digital video production, and website development.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Digital Media/Multimedia Authoring (CCC) (State CIP Code 0609070209) and/or Digital Media/Multimedia Presentation (CCC) (State CIP Code 0609070209).

Students are encouraged, but not required, to contact Digital Media faculty at 729-6019 for detailed advising to plan a program of study before enrolling in courses.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and

arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2141C - Multimedia II

4 Credit Hours
(Offered as needed)

An advanced course covering principles of design and information architecture surrounding interactive multimedia presentations. Students will learn an industry standard interactive DVD media authoring software application. Students will produce a finished interactive DVD.

Prerequisite(s): GRA 2140C.

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits (GRA, PGY) _

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Technology (AS) (DMMT)	Companion Certificate*	
First Year	DMMA	DMMP
Fall Semester		
PGY 1801C - Digital Photography I **4 Credit Hours**	√	√
GRA 1151C - Illustration I **3 Credit Hours**	√	√
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		

Mathematics General Education 3 **Credit Hours** Additional General Education **2 Credits** **Total Semester Hours: 15**		
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** ARH 1000 - Art Appreciation **3 Credit Hours ❖ † ♦ ¶** GRA 2190C - Graphic Design I **3 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** **Total Semester Hours: 14**	√	√
Summer Semester Social Science General Education **3 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** **Total Semester Hours: 7**		
Second Year		
Fall Semester GRA 2140C - Multimedia I **4 Credit Hours** ART 2603C - Digital Imaging II **4 Credit Hours** Science General Education **4 Credit Hours** **Total Semester Hours: 12**	√	√ √
Spring Semester CGS 2820 - Web Design **3 Credit Hours** GRA 2141C - Multimedia II **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** PGY 2221C - Commercial Photography II **4 Credit Hours** **Total Semester Hours: 12**	√	√

Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: DMMA - Digital Media/Multimedia Authoring (CCC) DMMP - Digital Media/Multimedia Presentation (CCC)		

College Credit Certificate

Digital Media/Multimedia Authoring (CCC)

Admission Program of Study Code DMMA
State CIP Code 0609070209

Students who successfully complete this diploma may be eligible to receive credits towards the Digital Media/Multimedia Technology (AS) degree (State CIP Code 1611080102).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-

based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 14

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Authoring (CCC) (DMMA)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** **Total Semester Hours: 7**
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** T**otal Semester Hours: 7**
Total Program Credits: 14

Digital Media/Multimedia Presentation (CCC)

Admission Program of Study Code DMMP
State CIP Code 0609070219

Students who successfully complete this diploma may be eligible to receive credits towards the Digital Media/Multimedia Technology (AS) degree (State CIP Code 1611080102).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Presentation (CCC) (DMMP)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** **Total Semester Hours: 11**
Spring Semester CGS 2820 - Web Design **3 Credit Hours** GRA 2140C - Multimedia I **4 Credit Hours** **Total Semester Hours: 7**
Total Program Hours: 18

Drafting Design Technology

Associate in Science

Computer-Aided Drafting and Design - Mechanical Design Option (AS)

Admission Program Objective Code CAD
State CIP Code 1615130102

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Computer-Aided Technical Design Certificate (CCC) (State CIP Code 0615130204) and/or Advanced Computer-Aided Technical Design Certificate (CCC) (State CIP 0615130101).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands,

advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 19

Technical Elective Courses

Select 25 credits from the following:

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETD 2218 - Geometric Dimensioning and Tolerancing

4 Credit Hours
(Fall, Summer)

An introductory course in geometric dimensioning and tolerancing using the geometric method nationally accepted according to ASMEY 14.5M. Topics covered include: definition and terms, symbols, datum referencing, locational tolerancing, form tolerancing, profile tolerancing, orientation and runout tolerancing, and math for positional tolerancing.

Prerequisite(s): ETD 1217 or equivalent.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

ETD 2735 - Mechanical Drafting III

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include: isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, and precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 2218 and ETD 2731 or equivalent.

Total Technical Elective Credits Required: 25

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer-Aided Drafting and Design - Mechanical Design Option (AS) (CAD)	Companion Certificate*	
First Year	CATD	ACAT
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours**	√	√

ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 13**	 √ 	√ √
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 1112 - Mechanical Drafting I **4 Credit Hours** ETD 2218 - Geometric Dimensioning and Tolerancing **4 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 14**	 √ 	 √ √
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 2731 - Mechanical Drafting II **4 Credit Hours** Social Science General Education **3 Credit Hours** **Total Semester Hours: 10**	 √ 	 √ √
Second Year		
Fall Semester ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** ETD 2735 - Mechanical Drafting III **4 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** Mathematics General Education **3 Credit Hours** **Total Semester Hours: 13**	 √ 	
Spring Semester ETD 2357C - Inventor I **3 Credit Hours** ETD 2368C - SolidWorks II **3 Credit Hours**	 	

Science General Education **4 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 13**		
Total Program Hours: 62		
* Courses with √ can also be used in the Companion Certificate indicated: CATD-Computer-Aided Technical Design Certificate (CCC) ACAT-Advanced Computer-Aided Technical Design Certificate (CCC)		

Computer-Aided Drafting and Design - Technical Illustration Option (AS)

Admission Program Objective Code CADI
State CIP Code 1615130102

The purpose of this program is to prepare students for employment as technical illustrators. Technical illustrators are typically responsible for 2D and 3D illustrations for use in technical documents and service manuals. Technical illustrators work in conjunction with engineers and technical writers to gather information that would be conveyed into technical drawings. Drawing software can include AutoCAD, Inventor, Solidworks, Isodrraw, PhotoShop, Illustrator or other software.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Computer-Aided Technical Design Certificate (CCC) (State CIP Code 0615130204).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and

systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 19

Technical Elective Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

ETD 1801C - Technical Illustration

3 Credit Hours
(Fall)

The purpose of this course is to help students develop the skills, knowledge, and attitudes necessary to be job entry-level qualified as technical illustrators.

Prerequisite(s): ETD 1112 or EGN 1130C, and ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

ETD 2802C - Technical Illustration II

3 Credit Hours
(Spring)

The purpose of this course is to help students develop advanced skills, knowledge, and attitudes necessary as technical illustrators, to include oblique, and axiometric projections, perspective and exploded pictorial drawings, and related techniques.

Prerequisite(s): ETD 1340C or equivalent.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 25

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer-Aided Drafting and Design - Technical Illustration Option (AS) **(CADI)**	Companion Certificate*
First Year	CATD
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours**	√ √

Total Semester Hours: 13	
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 2357C - Inventor I **3 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 12**	√
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1801C - Technical Illustration **3 Credit Hours** GRA 1152C - Illustration II **3 Credit Hours** Social Science General Education **3 Credit Hours** **Total Semester Hours: 12**	√
Second Year	
Fall Semester ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** ETD 2802C - Technical Illustration II **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** Mathematics General Education **3 Credit Hours** **Total Semester Hours: 12**	√
Spring Semester ETD 2371C - 3D Printing I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** Science General Education **4 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 14**	

Total Program Hours: 62	
* Courses with √ can also be used in the Companion Certificate indicated: CATD-Computer-Aided Technical Design Certificate (CCC)	

College Credit Certificate

Advanced Computer-Aided Technical Design Certificate (CCC)

Admission Program of Study Code ACAT
State CIP Code 0615130101

Students who successfully complete this certificate may be eligible to receive credits towards the Computer-Aided Drafting and Design - Mechanical Design Option (AS) degree (State CIP Code 1615130102).

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Advanced Computer-Aided Technical Design Certificate (CCC) (ACAT)
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** **Total Semester Hours: 10**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 1112 - Mechanical Drafting I **4 Credit Hours** **Total Semester Hours: 7**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 2731 - Mechanical Drafting II **4 Credit Hours** **Total Semester Hours: 7**
Total Semester Hours: 24

Computer-Aided Technical Design Certificate (CCC)

Admission Program of Study Code CATD
State CIP Code 0615130204

Students who successfully complete this certificate may be eligible to receive credits towards the Computer-Aided Drafting and Design - Mechanical Design Option (AS) degree (State CIP Code 1615130102) and the Computer-Aided Drafting and Design - Technical Illustration Option (AS) (State CIP Code 1615130102).

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Computer-Aided Technical Design Certificate (CCC) (CATD)
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 15

Early Childhood Education

Associate in Science

Early Childhood Education (AS)

Admission Program Objective Code ECED
State CIP Code 1413121004

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Child Development Early Intervention (CCC) (State CIP Code 0419070904), Child Care Center Management Specialization (CCC) (State CIP Code 0419070906), Infant/Toddler Specialization (CCC) (State CIP Code 0419070907), and/or Preschool Specialization (CCC) (State CIP Code 0419070908).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**

- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1401 - The Family In Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

This course is comprehensive in scope, emphasizing skills and concepts of parenting which include: adjustment to parental roles; parent-child communication, care, growth, and development of children; cultivating strong families; special concerns; alternative family structures; educational institutions working effectively with parents; and agencies and legislation affecting children and parents.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is

under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Early Childhood Education (AS) (ECED)	Companion Certificates*			
First Year	CDEI	CCCM	CITS	CCPS
Fall Semester EEC 1001 - Introduction to Early Childhood Ed **3 Credit Hours** EEC 1309 - Early Childhood Education Foundations **3 Credit Hours** EEC 1201 - Infants and Toddlers **3 Credit Hours** EEX 2010 - Introduction to Exceptional Children **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 15**	√ √ √ √	√ √	√ √	√ √
Spring Semester DEP 2100 - Child Growth and Development **3 Credit Hours** EEC 1949 - Internship, Early Childhood Education **3 Credit Hours** EEC 1401 - The Family In Early Childhood Education **3 Credit Hours** Mathematics General Education **- 3 Credit Hours** **Total Semester Hours: 12**	√ √	√	√ √	√ √
Summer Semester Science General Education **- 4 Credit Hours** Humanities General Education - **3 Credit Hours** **Total Semester Hours: 7**				
Second Year				

Fall Semester EEC 1601 - Assessment in Early Childhood Education **3 Credit Hours** EEC 2732 - Child Nutrition, Health and Safety **3 Credit Hours** EEC 1750 - Guidance for Young Children **3 Credit Hours** EEC 2220 - Language and Literacy Instruction In Early Childhood Education **3 Credit Hours** Additional General Education Credits **- 2 Credit Hours** **Total Semester Hours: 14**	√ √ √ √			
Spring Semester EEC 1002 - Early Childhood Program Administration **3 Credit Hours** EDF 1005 - Introduction to the Teaching Profession **3 Credit Hours** EEC 2222 - Math & Sci Instruction Early Child Ed **3 Credit Hours** Social Science General Education - **3 Credit Hours** **Total Semester Hours: 12**	√ √	√		
Total Program Hours: 60				
* Courses with √ can also be used in the Companion Certificate indicated: CDEI - Child Development Early Intervention (CCC) CCCM - Child Care Center Management Specialization (CCC) CITS - Infant/Toddler Specialization (CCC) CCPS - Preschool Specialization (CCC)				

College Credit Certificate

Child Care Center Management Specialization (CCC)

Admission Program of Study Code CCCM
State CIP Code 0419070906

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

Total Program Credits Required: 12

Child Development Early Intervention (CCC)

Admission Program of Study Code CDEI
State CIP Code 0419070904

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Total Core Credits Required: 36

Total Program Credits Required: 36

Infant/Toddler Specialization (CCC)

Admission Program of Study Code CITS
State CIP Code 0419070907

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the

NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

Total Core Credits Required: 12

Total Program Credits Required: 12

Preschool Specialization (CCC)

Admission Program of Study Code CCPS
State CIP Code 0419070908

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting)

as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

Total Core Credits Required: 12

Total Program Credits Required: 12

Emergency Administration and Management

Associate in Science

Emergency Administration & Management (AS)

Admission Program Objective Code EAMT
State CIP Code 1743030200

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Emergency Administrator & Manager (CCC) (State CIP Code 0743030201) and/or Homeland Security Emergency Manager (CCC) (State CIP Code 0743030202).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits 3 **Credit Hours**

Total General Education Credits Required: 18

Core Courses

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

FFP 2823 - Technical Applications in Emergency Management

3 Credit Hours
(Offered as needed)

This course explores issues and problems associated with the use of technology in emergency management. It examines strategies to overcome these issues and problems. Some of the subjects treated are use of the Internet, spatial analysis applications in vulnerability analysis, decision support systems, and emerging technologies.

FFP 2841 - Contingency Planning for the Private Sector

3 Credit Hours
(Offered as needed)

This course is designed to assist students in developing effective public sector plans by using the National Incident Management System and the Incident Command System templates. The curriculum includes case studies and development procedures for private sector logistics management and employee support planning.

FFP 2834 - Societal Issues in Disaster Management

3 Credit Hours
(Offered as needed)

This course examines human response to disaster events, including political and economic factors influencing vulnerability. It examines how individuals and institutions make decisions at all levels of disaster response, it is an introduction to current research pertaining to the sociological aspects of disaster, and it will provide increased awareness of the potential and difficulties in using social science research as a basis for modifying public policy.

Total Core Credits Required: 15

Technical Elective Courses

Select 27 credits from the following:

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) _

Total Technical Elective Credits Required: 27

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Emergency Administration & Management (AS) (EAMT)	Companion Certificates*	
First Year	ENAM	HSEM
Fall Semester FFP 1801 - Introduction to Emergency Management Administration **3 Credit Hours** FFP 2820 - Emergency Preparedness **3 Credit Hours** General Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Spring Semester Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours**		

General Education Course **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Second Year		
Fall Semester FFP 2823 - Technical Applications in Emergency Management **3 Credit Hours** FFP 2841 - Contingency Planning for the Private Sector **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Spring Semester FFP 2834 - Societal Issues in Disaster Management **3 Credit Hours** Technical Education Course **3 Credit Hours** General Education Course **3 Credit Hours** General Education Course **4 Credit Hours** General Education Course **2 Credit Hours** **Total Semester Hours: 15**		
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: ENAM - Emergency Administrator and Manager (CCC) HSEM - Homeland Security Emergency Manager (CCC)		

Fire Science Technology (AS)

Admission Program of Study Code FSCI

State CIP Code 1743020112

The Fire Science Technology Associate in Science degree program offers students a sequence of courses designed to provide relevant technical knowledge needed to prepare students for entry or advancement in the fire service or in

a related fire protection field. A technical certificate, Fire Officer Supervisor (6455) (T.C.), is included as an option within this degree program. Students may pursue the A.S. degree and earn the technical certificate while completing the requirements for the degree, or pursue the certificate to develop or upgrade their skills. Contact an advisor or counselor to determine the career education path that is best for you.

Career Opportunities
In addition to community fire departments, there are opportunities in government installations such as airports, as well as private fire-fighting companies. There is also a need for inspectors, investigators, forest rangers and smoke jumpers. In all cases, employment is based on high test scores and outstanding skills.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2720 - Company Officer

3 Credit Hours
(Fall, Spring, Summer)

Designed to assist fire officers in solving the varied problems and situations they will be required to manage effectively in today's ever changing fire service. The curriculum includes a review of fire department organization and administration, management theory, leadership, communication, motivation, and small group dynamics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2780 - Fire Department Administration

3 Credit Hours
(Fall, Spring, Summer)

The course is designed to present the principles of management theory, and its application in the fire service. The course is intended for officers whose area of responsibility encompasses long and short range planning, budgeting and administration.

Prerequisite(s): FFP 0010 and FFP 0020

Total Core Credits Required: 30

Technical Elective Courses

Select 15 credits from the following:

(Contains 15 hours articulation for Firefighter/Emergency Medical Technician-Combined (PSAV))

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.
And

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

College Credit Certificate

Emergency Administrator & Manager (CCC)

Admission Program of Study Code EMAM
State CIP Code 0743030201

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) (State CIP Code 1743030200).

Core Courses

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) **3 Credit Hours**

Total Core Credits Required: 24

Total Program Credits Required: 24

Fire Officer Supervisor (CCC)

Admission Program of Study Code FSUP

State CIP Code 0743020111

Earning this certificate increases management skills for professionals employed as Fire Fighters. The purpose of this certificate is to prepare students for employment as Firefighting and Prevention Supervisors to supervise Fire Fighters who control and extinguish fires, protect life and property, and conduct rescue efforts. The program is beneficial to professionals seeking career field enhancement. This program does not prepare students for certification as Fire Fighters. A student must successfully complete the basic recruit program in firefighting to become certified, pursuant to Chapter 633, Florida Statutes. This program does not complete the requirements to be eligible to sit for Bureau of Fire Standards and Training (BFST) certification exams. A student must contact the Bureau of Fire Standards and Training (BFST) for additional requirements.

Core Courses

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of

media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

Total Program Credits Required: 12

Homeland Security Emergency Manager (CCC)

Admission Program of Study Code HSEM
State CIP Code 0743030202

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration and Management A.S. degree (State CIP Code 1743030200).

Core Courses

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework

(NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies

necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) **3 Credit Hours**

Total Program Credits Required: 24

Vocational Certificate

Firefighter I/II (PSAV)

Admission Program of Study Code FIRN
State CIP Code 0743020303

Entry into the Firefighting Certificate Program requires meeting the standards established by the Florida Division of State Fire Marshal, Bureau of Fire Standards and Training. A copy of these requirements is available through the Public Safety Division of NWF State College.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) degree (State CIP Code 1743030200).

Core Courses

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 398

Corequisite Course

FFP 0077 - First Responder for Public Safety Personnel

45 Clock Hours
(Fall, Spring, Summer)

This course trains public safety members who are the first to arrive at an emergency in providing efficient and accurate pre-hospital care. Students assess patients for wounds to determine if trauma, shock, burns or closed airways are a problem and how to address those issues by dressing wounds, stabilizing the person or administering oxygen. They immobilize patients and address common emergency medical issues with basic treatments. This course includes hands-on, practical experience and is necessary to be eligible for first responder certification.

This course is a co-requisite course for students entering the Firefighting Certificate program who do not have certification for first responder, EMT, or paramedic.
*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Fire Fighter (Basic) (PSAV) (FIRE)
Fall Semester FFP 0010 - Firefighting I **206 Clock Hours** FFP 0020 - Firefighting II **192 Clock Hours** FFP 0077 - First Responder for Public Safety Personnel **45 Clock Hours** * **Total Semester Clock Hours: 398**
Total Program Hours: 398

* FFP0077 is a program corequisite unless student is a First Responder, Paramedic or EMT

Firefighter/Emergency Medical Technician-Combined (PSAV)

Admission Program of Study Code FIEM
State CIP Code 0743020312

Basic Skills Requirements: The student must be exempt or attain a **10th grade level** on each section of the TABE exam: Math, Language and Reading.

Entry into the Firefighter/Emergency Medical Technician-Combined Program requires meeting the standards established by the Florida Division of State Fire Marshal, Bureau of Fire Standards and Training. A copy of these requirements is available through the Public Safety Division of NWF State College.

Firefighters are trained to extinguish and control fires in response to situations where property, life, or the environment is in danger. At the scene of an emergency, firefighters perform tasks assigned by their commanding officer. Depending on the situation, they may need to provide medical attention, break through debris, operate fire hoses, or enter a burning building. Firefighters are often first responders to car accidents, heart attack scenes, and other medical emergencies that do not involve fire.

Graduates of this program will be eligible to apply for the examinations to become both a Florida Certified Emergency Medical Technician/National Registry Emergency Medical Technician Basic and Florida Fire Standards. This will allow graduates to obtain employment as a firefighter EMT after 2 semesters of training.

The Firefighter/EMT Certificate program is two semester program that consists of Firefighter standards and EMT training. Applicants to this program must have a high school diploma or GED and meet other applicable admission criteria. If the number of qualified applicants to the program exceeds the number of openings, students will be accepted using a combination of application points . Contact the Emergency Services Office at (850) 729-4924 for additional information.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) degree (State CIP Code 1743030200).

Core Courses

EMS 0119 - Emergency Medical Technician for Firefighters

140 Clock Hours
(Fall, Spring, Summer)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director

Corequisite(s): FFP 0010, FFP 0020, EMS 0119L

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 0119L - Emergency Medical Technician Lab for Firefighters

160 Clock Hours
(Fall, Spring, Summer)

This course provides an integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director.

Corequisite(s): FFP 0010, FFP 0020, EMS 0119

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is

required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 698

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Firefighter/Emergency Medical Technician-Combined (PSAV)
Fall Semester FFP 0010 - Firefighting I **206 Clock Hours** FFP 0020 - Firefighting II **192 Clock Hours** **Total Semester Clock Hours: 398** **Spring Semester** EMS 0119 - Emergency Medical Technician for Firefighters **140 Clock Hours** EMS 0119L - Emergency Medical Technician Lab for Firefighters **160 Clock Hours** **Total Semester Clock Hours: 300**
Total Program Clock Hours: 698

Emergency Medical Services

Associate in Science

Emergency Medical Services (AS)

Admission Program Objective Code EMSR
State CIP Code 1351090402

This curriculum forms the last stage of a career ladder program progression from Emergency Medical Technician (CCC) (State CIP Code 0351090415) to Paramedic (CCC) (State CIP Code 0351090405) to Emergency Medical Services (AS) degree.

Students interested in pursuing this program must have a current and active Florida Bureau of Emergency Medical Services EMT/Paramedic licensure. Contact the Emergency Services/Paramedic program at (850) 729-4924 for more information.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences 3 **Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

*** BSC 2020C (from Paramedic Core) may be used to meet GE Science.**

EMT Certificate Courses

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

Total EMT Credits Required: 12

Paramedic Certificate Core Courses

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

EMS 1335 - Emergency Vehicle Operators Course

1 Credit Hour
(Offered as needed)

Students receive basic education and information on the safe and effective operation of emergency vehicles.

Prerequisite(s): permission of the EMS Program Director.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for

visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Paramedic Credits Required: 43

Total Program Credits Required: 73

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Emergency Medical Services (AS) (EMSR)	Companion Certificates*	
First Year	EMTB	EMPM
Summer Semester		
EMS 1119C - Emergency Medical Technician **6 Credit Hours**	√	
EMS 1335 - Emergency Vehicle Operators Course **1 Credit Hour**	√	
EMS 1401L - EMT Lab **6 Credit Hours**	√	
HSC 1531 - Medical Terminology **3 Credit Hours**		√
Total Semester Hours: 14		
Fall Semester		
BSC 2020C - Human Structure and Function **4 Credit Hours**		√
EMS 2231C - Paramedic Processes I **5 Credit Hours**		√
EMS 2435L - Paramedic Lab I **5 Credit Hours**		√
EMS 2552 - Advanced Cardiac Life Support (ACLS) **1 Credit Hour**		√
EMS 1337 - Defensive Tactics **1 Credit Hour**		√
Total Semester Hours: 16		
Spring Semester		
EMS 2232C - Paramedic Processes II **5 Credit Hours**		√
EMS 2436L - Paramedic Lab II **5 Credit Hours**		√
EMS 2526 - Twelve-Lead EKG Interpretation **1 Credit Hour**		√
EMS 2553 - Pediatric Advanced Life Support (PALS) **1 Credit Hour**		√
EMS 2555 - International Trauma Life Support (ITLS) **1 Credit Hour**		√
Elective - CCJ, EMS, FFP - **3 Credit Hours**		

Total Semester Hours: 16		
Second Year		
Summer Semester EMS 2438C - Advanced Clinical Internship **2 Credit Hours** EMS 2233 - Paramedic Processes III **2 Credit Hours** EMS 2425L - Paramedic Externship **4 Credit Hours** EMS 2342 - Advanced Extrication **1 Credit Hour** DSC 2055 - Issues in Disaster Response **1 Credit Hour** General Education Course - **3 Credit Hours** **Total Semester Hours: 13**		 √ √ √ √ √
Fall Semester General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **2 Credit Hours** Total Semester Hours: 14		
Total Program Hours: 73		
* Courses with √ can also be used in the Companion Certificate indicated: EMTB - Emergency Medical Technician (Basic) (CCC) EMPM - Paramedic (CCC)		

College Credit Certificate

Emergency Medical Technician (CCC)

Admission Program of Study Code EMTN
State CIP Code 0351090415

Admission will be through a Limited Access application process. Graduates of this program will be eligible to apply for the examination to become a Florida certified Emergency Medical Technician and a National Registry Emergency Medical Technician Basic. Students interested in pursuing this program should contact the Emergency Medical Services Office at (850) 729-4924.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Medical Services (AS) degree (State CIP Code 1351090402).

Core Courses

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

Total Program Credits Required: 12

Paramedic (CCC)

Admission Program Objective Code EMPM
State CIP Code 0351090405

Admission will be through a Limited Access application process. Graduates will be eligible to sit for the Paramedic certification exam. The curriculum forms the core of the Emergency Medical Services A.S. degree (State CIP Code 1351090402). Students may "add on" general education credits and some college credit electives to the Paramedic certificate and earn the A.S. degree. Students interested in pursuing this program should contact the Emergency Medical Services Office at (850) 729-4924.

Core Courses

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 42

Engineering Technology

Associate in Science

Engineering Technology - Digital Design & Modeling Specialization Option (AS)

Admission Program Objective Code ETDD
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a

combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Computer-Aided Design and Drafting (CCC) (State CIP Code 0615000004), Rapid Prototyping Specialist (CCC) (State CIP Code 0615000012) and/or Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands,

advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools,

advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Digital Design & Modeling Specialization Option (AS) (ETDD)	Companion Certificates*		
First Year	CADD	RAPP	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours - Online Only** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours - Night Only** **Total Semester Hours: 15**			 √ √
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** Technical Elective **3 Credit Hours**	 √ √		 √ √

Total Semester Hours: 15			
Second Year			
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** ETI 1420 - Properties Materials/Cutting Tools **3 Credit Hours - Online Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	√
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: CADD - Computer-Aided Design and Drafting (CCC) RAPP - Rapid Prototyping Specialist (CCC) ETSS - Engineering Technology Support Specialist (CCC)			

Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS)

Admission Program Objective Code ETDM
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a

combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007), Digital Manufacturing Specialist (CCC) (State CIP Code 0615000009), and Rapid Prototyping Specialist (CCC) (State CIP code 0615000012) certificates.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation,

sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe

operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) (ETDM)	Companion Certificates*		
First Year	ETTS	DMFS	RAPP
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**			

ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours** **Total Semester Hours: 15**	√	√ √	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	
Second Year **Fall Semester** PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** ETI 1420 - Prop of Materials/Cutting Tools **3 Credit Hours - Online Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours**	√	√ √	√

Total Semester Hours: 15			
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC) DFMS - Digital Manufacturing Specialist (CCC) RAPP - Rapid Prototyping Specialist (CCC)			

Engineering Technology - Electronics Specialization Option (AS)

Admission Program Objective Code ETES
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the five specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, Digital Manufacturing and Electronics with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hours core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.
Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Required Courses

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

EET 1141C - Solid State Electronics

3 Credit Hours
(Fall, Spring)

This is the third course required for Electronics Aide certificate. This course introduces the student to the concept, components, and uses of solid state electronics. Topics include semiconductor devices; thyristors and diodes, transistors, amplifiers, power supplies, oscillators, and optoelectronics. The use of capacitors and inductors in solid state electronics will be also covered. The design, set-up, and troubleshooting solid state circuits and devices using various power supplies and function generators will be dispersed throughout the class.

Prerequisite(s): EET 1025C

EET 1180C - Industrial Electronic Troubleshooting

3 Credit Hours
(Fall, Spring)

This course covers troubleshooting procedures for a variety of electronic equipment and circuits common to industrial applications. The student will develop and implement trouble shooting protocols and plans, equipment monitoring plans, a preventive maintenance plan, and select appropriate test and monitoring equipment. Safety in an industrial setting will be stressed and reinforced through a series of lab exercises throughout the course.

Prerequisite(s): EET 1084C

EET 2155C - Linear Integrated Circuits

3 Credit Hours
(Fall, Spring)

This course covers the fundamentals and applications of linear integrated circuits and operational amplifiers. The course covers includes inverting and non-inverting amplifiers, comparators, signal generators, differential and instrumentation amplifiers, operational amplifier specifications, active filters, modulator-demodulator integrated circuits, timers, analog to digital converters (ADC), and digital to analog converters (DAC) and measurement and analysis of linear circuits and devices.

Prerequisite(s): EET 1015C, EET 1025C

Total Technical Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Electronics Specialization Option (AS) (ETES)	Companion Certificate*
First Year	ETSS
Fall Semester	
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**	
ETI 1710 - Occupational Safety **3 Credit Hours - Offered Online Only**	
SLS 2505 - Critical Thinking **3 Credit Hours**	√
ETD 1320C - AutoCAD I **3 Credit Hours**	√
EET 1084C - Introduction to Electronics **3 Credit Hours -Offered at Night Only**	
Total Semester Hours: 15	

Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** EET 1015C - Electricity/Electronics I, DC Circuits **3 Credit Hours - Offered at Night Only** ETD 2150 - Industrial Print Reading **3 Credit Hours** **Total Semester Hours: 15** **Second Year**	√ √
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** EET 1180C - Industrial Electronic Troubleshooting **3 Credit Hours** ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Online Only** EET 1025C - Electricity/Electronics II, AC Circuits **3 Credit Hours - Offered at Night Only** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** **Total Semester Hours: 15**	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science **3 Credit Hours** EET 1141C - Solid State Electronics **3 Credit Hours** EET 2155C - Linear Integrated Circuits **3 Credit Hours** **Total Semester Hours: 15**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC)	

Engineering Technology - Maintenance Technician Specialization Option (AS)

Admission Program Objective Code ENMT
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. Instruction in electrical/electronic principles, basic mechanic fundamentals, robotics and machine repair prepare the student to meet the demands and develop the skills required to maintain and troubleshoot high-tech manufacturing equipment. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality. Candidates interested in this program should be interested in working with their hands and enjoy the challenges of programming and troubleshooting electrical and mechanical equipment.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected core courses from this program of study may be eligible to receive the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007) certificate.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Required Courses

EEL 2603C - Robotics-Mechanics and Controls

3 Credit Hours
(Fall)

This course introduces the student to robotics. Instructional topics will include robot classifications, applications, Input/Output (I/O) and sensor interfacing.

Prerequisite(s): ETS 1542C

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

ETM 1315C - Hydraulics & Pneumatics Fundamentals

3 Credit Hours
(Spring)

This course introduces the student to basic hydraulic and pneumatic fundamentals. Instructional topics will include components, fluid pressure and flow and basic circuit design and application.

ETS 1542C - Introduction to Programmable Logic Controllers

3 Credit Hours
(Fall)

This is an introductory course in Programmable Logic Controllers (PLCs.) The student will learn basic concepts with a focus on programming and practical applications.

Prerequisite(s): EET 1084C

Total Technical Credits Required: 15

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Maintenance Technician Specialization Option (ENMT)	Companion Certificate*
First Year	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** EET 1015C - Electricity/Electronics I, DC Circuits **3 Credit Hours** **Total Semester Hours: 15**	
Second Year	
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours**	

ETI 1420 - Properties of Materials and Processes **3 Credit Hours**	√
EET 1025C - Electricity/Electronics II, AC Circuits **3 Credit Hours**	√
ETS 1542C - Introduction to Programmable Logic Controllers **3 Credit Hours**	
Total Semester Hours: 15	
Spring Semester	
ETI 2110 - Total Quality Tools **3 Credit Hours**	
PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**	√
Social Science General Education **3 Credit Hours**	
EEL 2603C - Robotics-Mechanics and Controls **3 Credit Hours**	
ETM 1315C - Hydraulics & Pneumatics Fundamentals **3 Credit Hours**	
Total Semester Hours: 15	
Total Program Credits: 60	
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC)	

Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS)

Admission Program Objective Code ETMD
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the CNC Machinist/Fabricator (CCC) (State CIP Code 0615080502), the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to

meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2905 - Independent Study – Drafting

1 Credit Hour
(Fall, Spring, Summer)

Practical treatment of special geometry, graphics, and design with emphasis on individual work projects utilizing such graphical techniques as orthographic projection, perspective drawing, auxiliary views, topographic drawing, and graphing.

Prerequisite(s): EGN 1111C and ETD 1112 or permission of instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
* This course may be taken up to four times for credit.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

ETI 2419C - Advanced Concepts of CNC Machines and CNC Machining Practices

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with advanced concepts in CNC machines and CNC machining to include: theory, operation, setup, safety, and practices.

Prerequisite(s): PMT 2261C or PMT 2262C

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe

operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Mechanical Design and Fabrication Specialization Option (AS) (ETMD)	Companion Certificate*	
First Year	CNMM	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		

ETI 1710 - Occupational Safety **3 Credit Hours**		
SLS 2505 - Critical Thinking **3 Credit Hours**		√
ETD 1320C - AutoCAD I **3 Credit Hours**	√	
EET 1084C - Introduction to Electronics **3 Credit Hours**		
Total Semester Hours: 15		
Spring Semester		
ETD 2150 - Industrial Print Reading **3 Credit Hours**		√
ENC 2210 - Technical Report Writing **3 Credit Hours**		√
ETM 1005C - Basic Mechanical Operations **3 Credit Hours**		
MAC 1105 - College Algebra **3 Credit Hours** ♦		
Technical Elective **3 Credit Hours**		
Total Semester Hours: 15		
Second Year		
Fall Semester		
ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Online Only**		√
ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours**		√
PHY 1020 - Physical Science **3 Credit Hours** ♦		
Technical Elective **3 Credit Hours**	√	
Technical Elective **3 Credit Hours**		
Total Semester Hours: 15		
Spring Semester		
PHI 2600 - Introduction to Ethics **3 Credit Hours** ❖ † ¶		√
ETI 2110 - Total Quality Tools **3 Credit Hours**		
Social Science General Education **3 Credit Hours**	√	
Technical Elective **3 Credit Hours**		
Technical Elective **3 Credit Hours**		

Total Semester Hours: 15		
Total Program Hours : 60		
* Courses with √ can also be used in the Companion Certificate indicated: CNMM - CNC Machinist/Fabricator (CCC) ETSS - Engineering Technology Support Specialist (CCC)		

College Credit Certificate

CNC Machinist/Fabricator (CCC)

Admission Program of Study Code CNMM
State CIP Code 0648051002

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations

are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

CNC Machinist/Fabricator (CCC) (CNMM)
First Year **Fall Semester** ETD 2364C - SolidWorks I **3 Credit Hours** PMT 1250C - Introduction to CNC Machining **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 6**
Spring Semester PMT 2261C - CNC Machining I **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 3**
Second Year **Fall Semester** PMT 2262C - CNC Machining II **3 Credit Hours - Offered at Night Only**

Total Semester Hours: 3
Total Program Hours: 12

Computer-Aided Design and Drafting (CCC)

Admission Program of Study Code CADD
State CIP Code 0615130304

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Design & Modeling Specialization Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Computer-Aided Design and Drafting (CCC) (CADD)
Fall Semester ETD 1320C - AutoCAD I **3 Credit Hours** ETD 2357C - Inventor I **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 2358C - Inventor II **3 Credit Hours** ETD 2368C - SolidWorks II **3 Credit Hours** **Total Semester Hours: 9**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 24

Digital Manufacturing Specialist (CCC)

Admission Program of Study Code DMFS
State CIP Code 0615000009

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid

prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Digital Manufacturing Specialist (CCC) (DMFS)
Fall Semester ETD 2357C - Inventor I **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** PMT 1203C - Introduction to Machining **3 Credit Hours - Offered at Night Only** PMT 1250C - Introduction to CNC Machining **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester PMT 2261C - CNC Machining I **3 Credit Hours Offered at Night Only** ETD 2371C - 3D Printing I **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester PMT 2262C - CNC Machining II **3 Credit Hours Offered at Night Only** ETD 2372C - 3D Printing II **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 24

Engineering Technology Support Specialist (CCC)

Admission Program of Study Code ETSS
State CIP Code 0615000007

Students who successfully complete this certificate may be eligible to receive credits towards one of the Engineering Technology (AS) degree (State CIP Code 1615000001) specializations: Engineering Technology - Electronics Specialization Option (AS), Engineering Technology - Maintenance Technician Specialization Option (AS), Engineering Technology - Digital Design & Modeling Specialization Option (AS), Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) or Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS) .

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology Support Specialist (CCC) (ETSS)
Fall Semester EET 1084C - Introduction to Electronics **3 Credit Hours - Offered at Night Only** ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Offered Online Only** ETI 1710 - Occupational Safety **3 Credit Hours - Offered Online Only** **Total Semester Hours: 9**
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Rapid Prototyping Specialist (CCC)

Admission Program of Study Code RAPP
State CIP Code 0615000012

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) or the Engineering Technology - Digital Design & Modeling Specialization Option (AS) Option (Both State CIP Code 1615000001).

Core Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

Total Technical Elective Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Rapid Prototyping Specialist (CCC) (RAPP)
Fall Semester ETD 2364C - SolidWorks I **3 Credit Hours** ETD 2371C - 3D Printing I **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester ETD 2368C - SolidWorks II **3 Credit Hours** ETD 2372C - 3D Printing II **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 12

Graphics Technology

Associate in Science

Graphics Technology - Graphic Design Option (AS)

Admission Program Objective Code GRTH
State CIP Code 1611080300

The Graphics Technology (Graphic Design Technology) A.S. degree is intended for students interested in careers in Graphic Design and Commercial Art where creativity and visual communication are core competencies. Students are encouraged, but not required, to contact Graphic Arts faculty at 729-6019 for detailed advising to plan a program of study before enrolling in courses.

Students who successfully complete selected courses from this program of study may be eligible to receive the Graphic Design Production (CCC) (State CIP Code 0650040204), and/or Graphic Design Support (CCC) (State CIP Code 0650040202).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 24

Technical Elective Courses

Select 22 credits from the following:

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial

relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2905 - Independent Study – Graphic Design

1 Credit Hour
(Offered as needed)

The student will initiate independent computer related work, utilizing various software and hardware. The course may be taken four times for credit.

Prerequisite(s): GRA 1151C or PGY 1801C

▲Technology-Across-the-Curriculum Course.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 2221C - Commercial Photography II

4 Credit Hours
(Offered as needed)

As advanced a course that allows the student to expand their skill set in producing photographic illustrations for industrial and advertising use. Students may explore product, portrait, and on-location commercial photographic projects.

Prerequisite(s): PGY 1220C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2804C - Digital Photography III

4 Credit Hours
(Offered as needed)

An advanced-level photography courses where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 2802C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits (GRA, PGY) _

Total Technical Elective Credits Required: 22

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Graphics Technology, Graphics Design Option (AS) (GRTH)	Companion Certificate*	
First Year	GRDS	GRAT
Fall Semester		
PGY 1801C - Digital Photography I **4 Credit Hours**		√
GRA 1151C - Illustration I **3 Credit Hours**	√	√
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		
Mathematics General Education **3 Credit Hours**		
Additional General Education **2 Credit Hours**		

Total Semester Hours: 15		
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** Humanities General Education **3 Credit Hours** Science General Education **4 Credit Hours** **Total Semester Hours: 14**	√ √	√ √
Summer Semester Social Science General Education **3 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** **Total Program Hours: 7**		√
Second Year		
Fall Semester GRA 1152C - Illustration II **3 Credit Hours** GRA 2191C - Graphic Design II **3 Credit Hours** ART 2603C - Digital Imaging II **4 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** GRA 2900 - Independent Study – Graphic Art **1 Credit Hour** **Total Semester Hours: 15**	√	√ √
Spring Semester PGY 2221C - Commercial Photography II **4 Credit Hours** GRA 2950C - Advanced Graphic Projects **4 Credit Hours** PGY 2804C - Digital Photography III **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** **Total Semester Hours: 13**		

Total Program Hours: 64		
* Courses with √ can also be used in the Companion Certificate indicated: Graphic Design Support (CCC) GRAT - Graphics Design Production (CCC)		

Graphics Technology - Visual Artist Option (AS)

Admission Program Objective Code GRTV
State CIP Code 1611080300

The Graphics Technology (Graphic Design Technology) A.S. degree is intended for students interested in careers in Graphic Design and Commercial Art where creativity and visual communication are core competencies. Students are encouraged but not required to contact Graphic Arts faculty for detailed advising before enrolling in courses to plan a program of study at 729-6019.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2500C - Painting I

3 Credit Hours
(Fall, Spring)

Course will include design elements, composition and spatial relationships. Emphasis is on color theory, color mixing, and execution thereof within a variety of subject matter. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 26

Technical Elective Courses

Select 20 credits from the following:

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2701C - Sculpture I

3 Credit Hours
(Spring)

An introductory course in the technical and aesthetic consideration of sculptural forms. Includes a wide range of materials and expressions, representing past and present sculptural methods. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2703C - Sculpture II

3 Credit Hours
(Spring)

Allows continued experience in more complex three-dimensional techniques; emphasis on individual projects and conceptual approach.

Prerequisite(s): ART 2701C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2501C - Painting II

3 Credit Hours
(Fall, Spring)

This course is a continuation of Painting I ART 2500C with emphasis on further exploration of student’s personal style and original techniques. Further experimentation in abstraction and emotional aspects of form and color are explored

and expressed.

Prerequisite(s): ART 2500C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2955 - Portfolio Development

3 Credit Hours
(Spring)

Development of a working portfolio through studio project aimed at fulfilling the general requirements the average company, university, art school or advertising agency looks for in a portfolio presentation.

Prerequisite(s): ART 1201C, ART 1203C, ART 1300C, ART 1301C.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits _

Total Technical Elective Credits Required: 20

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Graphics Technology, Visual Artist Option (AS) (GRTV)
First Year
Fall Semester ART 1300C - Drawing I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours**

Additional General Education **2 Credit Hours**

Total Semester Hours: 15

Spring Semester

GRA 1151C - Illustration I **3 Credit Hours**

ART 1201C - Two-Dimensional Design **3 Credit Hours**

Humanities General Educaiton **3 Credit Hours**

Science General Education **4 Credit Hours**

Total Semester Hours: 13

Summer Semester

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism **3 Credit Hours ❖ † ¶**

PGY 1801C - Digital Photography I **4 Credit Hours**

Total Semester Hours: 7

Second Year

Fall Semester

GRA 2190C - Graphic Design I **3 Credit Hours**

GRA 1152C - Illustration II **3 Credit Hours**

ARH 2402 - Art History: Modern Art **3 Credit Hours ❖ † ¶**

ART 2500C - Painting I **3 Credit Hours**

ART 1301C - Drawing II **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ART 2501C - Painting II **3 Credit Hours**

ART 1203C - Three-Dimensional Design **3 Credit Hours**

Social Science General Education **3 Credit Hours**

PGY 1220C - Commercial Photography I **4 Credit Hours**

GRA 2905 - Independent Study – Graphic Design **1 Credit Hour**

Total Semester Hours: 14
Total Program Hours: 64

College Credit Certificate

Graphic Design Production (CCC)

Admission Program of Study Code GRDP
State CIP Code 0611080303

Students who successfully complete this certificate may be eligible to receive credits towards the Graphics Technology (Graphic Design) A.S. Degree (State CIP Code 1611080300).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 25

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Graphic Design Production (CCC) (GRAT)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** **Total Semester Hours: 14**
Spring Semester ART 2603C - Digital Imaging II **4 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** GRA 1152C - Illustration II **3 Credit Hours** **Total Semester Hours: 11**
Total Program Hours: 25

Graphic Design Support (CCC)

Admission Program of Study Code GRDS
State CIP Code 0611080302

Students who successfully complete this certificate may be eligible to receive credits towards the Graphics Technology (Graphic Design) A.S. Degree (State CIP Code 1611080300).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 14

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Graphic Design Support (CCC) (GRDS)
Fall Semester ART 2602C - Digital Imaging I **4 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** **Total Semester Hours: 7**
Spring Semester

PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** **Total Semester Hours: 7**
Total Program Hours: 14

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Health Services Management

Associate in Science

Health Services Management (AS)

Admission Program Objective Code HTMG
State CIP Code 1351070101

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **2 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

HSA 1100 - Introduction to Health Care

3 Credit Hours
(Fall)

This course provides an overview of the United States Healthcare System, including the economic, social, political, and technological forces that shape the industry. The role of state and federal government and regulatory agencies in healthcare delivery is examined. The fundamental roles and responsibilities of healthcare team members are surveyed. Healthcare safety, security, and infection control procedures will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage

and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

or

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of

interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1346 - Supervision II

3 Credit Hours
(Offered as needed)

The course presents a continuing study of the functions of a personnel manager, philosophy of general management, employee socioeconomic climate and other information. Included are orientation, training, labor unions, safety, health and other related topics.

Prerequisite(s): MNA 1345 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Note(s):

***** *Anatomy & Physiology I with Anatomy & Physiology II may be substituted for BSC 2020C.*

*** Students who have successfully completed a health related program such as dental assisting, practical nursing, or surgical technology may challenge the Medical Terminology course. Contact the Division Director for further information.*

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Health Services Management (AS) (HTMG)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** HSA 1100 - Introduction to Health Care **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Mathematics General Education **- 3 Credit Hours**

BSC 2020C - Human Structure and Function **4 Credit Hours** or BSC 1085C - Anatomy and Physiology I and BSC 1086C - Anatomy and Physiology II

Total Semester Hours: 16

Spring Semester

HSC 1100 - Health Education **3 Credit Hours**

HSC 1400 - First Aid **3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

HSC 1531 - Medical Terminology **3 Credit Hours**

MNA 1161 - Customer Service **3 Credit Hours**

Social Science General Education **- 3 Credit Hours**

Humanities General Education Course **- 3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

MNA 1345 - Supervision I **3 Credit Hours**

OST 2335 - Business Communications **3 Credit Hours** or SPC 2300 - Interpersonal Communication

ENC 2210 - Technical Report Writing **3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Additional General Education Credits - **2 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 60

Hospitality and Tourism

Associate in Science

Culinary Management (AS)

Culinary Management

Admission Program of Study code: CUL

State CIP Code 1252090101

The Emerald Coast is one of the top tourist beach destinations in the U.S. and tourism is one of the leading industries in Northwest Florida. Northwest Florida State College's Culinary A.S. Degree Program is designed to support the tourism industry by preparing students for employment in the culinary and restaurant industry. Students will gain employability skills and knowledge through classroom instruction and culinary lab experience in the following courses Sanitation and Safety; Maintenance and Operation of Equipment; Methods of Preparation an d Cooking; Perform Different Types of Food Services; Nutrition; Baking; and Dining Room and Beverage Management. Students will also receive training in communications, leadership and human relations skills. This program focuses on broad, transferable skills and stresses understanding and demonstration of elements of the culinary industry. Careers include culinary manager, food and beverage manager, pantry cook, executive chef and many more.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in :

Chef's Apprentice (CCC)
Culinary Arts (CCC)

Culinary Arts Management Operations (CCC)

General Education

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**
- MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**
- BSC 1005 - General Biology **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦** or CHM 1020 - Chemical Science **3 Credit Hours ♦**
- ECO 2013 - Economics I **3 Credit Hours ♦**
- HUN 2201 - Nutrition **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup.

Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Culinary Management (AS)
First Year
Fall Semester FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** SLS 1101 - College Success **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester FSS 1202L - Food Production I **3 Credit Hours** FSS 2100 - Food Plans and Menu Preparation **3 Credit Hours** BSC 1005 - General Biology or PHY 1020 - Physical Science or CHM 1020 - Chemical Science **3 Credit Hours ♦** MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦** **Total Semester Hours: 12**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** FSS 1246L - Baking and Pastries I **3 Credit Hours** FSS 1120 - Food and Beverage Purchasing **3 Credit Hours** **Total Semester Hours: 9**
Second Year
Fall Semester FSS 1001 - Culinary Techniques **3 Credit Hours**

FSS 1221L - Food Production II **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** HUN 2201 - Nutrition **3 Credit Hours** FSS 2240L - Classical Cuisine **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester FSS 2942 - Culinary Internship **3 Credit Hours** FSS 2242L - International and Regional Cuisine **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** **Total Semester Hours: 12**
Total Program Hours: 60

Hospitality and Tourism (AS)

Hospitality and Tourism

Admission Program of Study Code HSTR

State CIP Code 1252090101

The Hospitality and Tourism program prepares students for employment in management positions in the hospitality industry and/or provides supplemental training for persons previously or currently employed in these occupations. The hospitality industry as addressed in this program includes the hotel, motel, bed and breakfast, resort, club, marina, and other lodging organizations.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in :

Event Planning Management (CCC)

Food and Beverage Management (CCC)

Food and Beverage Operations (CCC)

Food and Beverage Specialist (CCC)

Guest Services Specialist (CCC)

Rooms Division Management (CCC)

Rooms Division Operations (CCC)

Rooms Division Specialist (CCC)

General Education

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**
- MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**
- BSC 1005 - General Biology **3 Credit Hours ♦** or CHM 1020 - Chemical Science **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦**
- ECO 2013 - Economics I **3 Credit Hours ♦**
- HUN 2201 - Nutrition **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Hospitality and Tourism (AS) – Specializations – Event Planning, Food and Beverage, and Room Division
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** SLS 1101 - College Success **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** FSS 1250 - Dining Room Management **3 Credit Hours** BSC 1005 - General Biology, PHY 1020 - Physical Science, or CHM 1020 - Chemical Science **3 Credit Hours ♦**

MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦** **Total Semester Hours: 12**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** HFT 1410 - Front Office Management **3 Credit Hours** CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 9**
Second Year
Fall Semester HFT 1300 - Managing Housekeeping **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** HUN 2201 - Nutrition **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HFT 2210 - Hospitality Management **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** HFT 2942 - Hospitality Internship **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 60

College Credit Certificate

Chef's Apprentice (CCC)

Admission Program of Study Code: CHEF

State CIP Code 0612050302

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Culinary Arts (CCC)

Admission Program of Study Code: CULA

State CIP Code 0612050301

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 36

Culinary Arts Management Operations (CCC)

Admission Program of Study Code: CULM

State CIP Code 0612050401

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 2240L - Classical Cuisine

3 Credit Hours
(Fall)

Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 18

Event Planning Management (CCC)

Admission Program of Study Code (EPMG)

State CIP Code 0252090905

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.

The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other

departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Event Planning Management (CCC) (EPMG)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** HFT 2210 - Hospitality Management **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester

FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Total Semester Hours: 24

Food and Beverage Management (CCC)

Admission Program of Study Code FBMG
State CIP Code 0252090503

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and

hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beveragement Management (CCC) (FBMG)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FSS 2500 - Food and Beverage Cost Control **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester

FSS 1250 - Dining Room Management **3 Credit Hours** HFT 2210 - Hospitality Management **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** FSS 1120 - Food and Beverage Purchasing **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester HFT 2942 - Hospitality Internship **3 Credit Hours** FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 6**
Total Semester Hours: 30

Food and Beverage Operations (CCC)

Admission Program of Study Code FBOP
State CIP Code 0252090508

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101)

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beverage Operations (CCC) (FBOP)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** **Total Semester Hours: 6**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Second Year
Spring Semester
FSS 2500 - Food and Beverage Cost Control **3 Credit Hours**
FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours**
Total Semester Hours: 6
Total Semester Hours: 18

Food and Beverage Specialist (CCC)

Admission Program of Study Code FBSP
State CIP Code 0252090507

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101)

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beverage Specialist (CCC) (FBSP)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Second Year
Spring Semester
FSS 2500 - Food and Beverage Cost Control **3 Credit Hours**
Total Semester Hours: 3
Total Semester Hours: 12

Guest Services Specialist (CCC)

Admission Program of Study Code GUES
State CIP Code 0252090403

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Guest Services Specialist (CCC) (GUES)	Companion Certificate*
First Year	
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 3**	
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 3**	
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** **Total Semester Hours: 3**	√
Total Program Credits: 15	
* Courses with √ can also be used in the Companion Certificate indicated: Rooms Division Operations (CCC)	

Rooms Division Management (CCC)

Admission Program of Study Code RMMG
State CIP Code 0252090402

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems

approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Rooms Division Management (CCC) (RMMG)	Companion Certificate*
First Year	
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 6**	
Second Year	
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** HFT 2942 - Hospitality Internship **3 Credit Hours** FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 9**	√
Total Program Credits: 30	
* Courses with √ can also be used in the Companion Certificate indicated: Rooms Division Operations (CCC)	

Rooms Division Operations (CCC)

Admission Program of Study Code RMOP
State CIP Code 0252090406

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 19

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Rooms Division Operations (CCC) ()
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours**

Total Semester Hours: 6
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** HFT 1410 - Front Office Management **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester HFT 2940 - Hospitality Internship **1 Credit Hour** **Total Semester Hours: 1**
Second Year
Fall Semester
HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours**
HFT 2942 - Hospitality Internship **3 Credit Hours**
Total Semester Hours: 6
Total Semester Hours: 19

Rooms Division Specialist (CCC)

Admission Program of Study Code ROOM
State CIP Code 0252090405

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 13

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Rooms Division Specialist (CCC) (ROOM)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** HFT 2940 - Hospitality Internship **1 Credit Hour** **Total Semester Hours: 4**
Total Semester Hours: 13

Industrial Management Technology

Associate in Science

Industrial Management Technology (AS)

Admission Program Objective Code INDU
State CIP Code 1652020501

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**

- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

Required Course

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

GEB 1214 - Business and Supervision Terminology

2 Credit Hours
(Fall)

This course is designed for students to achieve mastery of the special vocabulary, jargon, and concept terminology associated with general business and supervision in the modern workplace. Students will apply the terms in common workplace scenarios and hypothetical situations, as well as in standard written documents and assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 29

Technical Elective Courses

Select 13 credits from the following:

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various

areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2947 - Academic Learning Field Studies I

1 Credit Hour
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2948 - Academic Learning Field Studies II

2 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in

a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2949 - Academic Learning Field Studies III

3 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Total Technical Elective Credits Required: 13

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Industrial Management Technology (AS) (INDU)
First Year
Fall Semester GEB 1214 - Business and Supervision Terminology **2 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **1 Credit Hours** **Total Semester Hours: 15**
Spring Semester ETI 1710 - Occupational Safety **3 Credit Hours** MNA 1345 - Supervision I **3 Credit Hours** Social Science General Education Course **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours** Humanities General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester Science General Education Course **3 Credit Hours** ACG 2001 - Accounting I **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** MAN 2300 - Personnel Management **3 Credit Hours** MNA 2100 - Organizational Behavior **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Medical Coder/Biller

College Credit Certificate

Medical Coder/Biller (CCC)

Admission Program of Study Code MEDB
State CIP Code 0351070714

Core Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

with

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

OR

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1432 - Pathopharmacology

3 Credit Hours
(Fall)

Introduction to the nature, cause, and treatment of disease entities and the body's defense mechanisms. Commonly used drugs will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2253 - CPT Coding - Part 1

3 Credit Hours
(Spring)

Instruction and practice in basic CPT coding conventions, principles of classifying physician services using current procedural terminology (CPT-4), APC, and auditing procedures. Ethical standards of practice will be analyzed.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

(Previously listed as HIM1253)

HIM 2272 - Healthcare Reimbursement

3 Credit Hours
(Summer)

Emphasis on billing regulations for the State of Florida. Course content includes LMRPS, Workers' Compensation laws, Florida Medicare, and claims for automobile accident injuries.

Prerequisite(s): HIM 2253 and HIM 2724 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2291 - CPT Coding Part 2

3 Credit Hours
(Spring)

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, inpatient and outpatient prospective payment systems, encoding software and RBRVs.

Prerequisite(s): HIM 2253 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2724 - ICD Coding Part 1

3 Credit Hours
(Fall)

This course provides a foundation using ICD-10-CM/PCS coding conventions, rules, methodology and sequencing, data sets, documentation requirements, and coding resources.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

HIM 2729 - ICD Coding Part 2

3 Credit Hours
(Fall)

This course focuses on assigning appropriate ICD, DRG, and Level II (HCPCS) codes to a wide range of original source medical documents. This course increases the quality of code selection by applying the decision process in problem solving using well-defined medical record review methods and guidelines. Ethical practices will be discussed.

Prerequisite(s): HIM 2724 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2815C - Professional Practice Experience

3 Credit Hours
(Summer)

Working in a simulated, online environment, students will endeavor to code and bill using nationally recognized, American Health Information Management Association (AHIMA) simulation software.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

Total Core Credits Required: 37

Total Program Credits Required: 37

Notes:

- Students must earn a grade of "C" or higher in each course in the curriculum in order to progress through the curriculum.
- Students must have a High School Diploma or GED to graduate from this program.

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Medical Coder/Biller (CCC) (MEDB)
Fall Semester BSC 2020C - Human Structure and Function **4 Credit Hours** HSC 1531 - Medical Terminology **3 Credit Hours** HIM 1432 - Pathopharmacology **3 Credit Hours**

HIM 2724 - ICD Coding Part 1 **3 Credit Hours** (Session 2) HIM 2729 - ICD Coding Part 2 **3 Credit Hours** (Session 3) **Total Semester Hours: 16**
Spring Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** HIM 1000 - Health Information and Delivery Systems **3 Credit Hours** HIM 1012 - Health Care and Legal Compliance **3 Credit Hours** HIM 2253 - CPT Coding - Part 1 **3 Credit Hours** (Session 2) HIM 2291 - CPT Coding Part 2 **3 Credit Hours** (Session 3) **Total Semester Hours: 15**
Summer Semester HIM 2815C - Professional Practice Experience **3 Credit Hours** HIM 2272 - Healthcare Reimbursement **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 37

Music Production Technology

Associate in Science

Music Production Technology (AS)

Admission Program Objective Code MUSC
State CIP Code 1650091300

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Audio Technology (Recording Arts) (CCC) (State CIP Code 0650060209).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**

- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

MUM 1620 - Audio and Acoustic Fundamentals

3 Credit Hours
(Fall, Spring, Summer)

Audio and Acoustic Fundamentals explores the basics of audio systems and equipment and the acoustical environment in which they are used. Emphasis is placed on equipment terminology, function and acoustical listening. The two basic fundamentals are summed together to begin laying the basic foundation required to operate audio and recording equipment.

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

Total Core Credits Required: 15

Technical Elective Courses

Select 31 credits from the following:

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- ____ ____ Other Approved College Credits (MUL, MUM, MUN, MUS, MUT, MVB, MVK, MVP, MVS, MVV, MVW)
- ____ ____ Other Approved College Credits

Total Technical Elective Credits Required: 31

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Music Production Technology (AS) (MUSC)	Companion Certificate*
First Year	ATRA
Summer Semester MUT 1001 - Fundamentals of Music **3 Credit Hours** **Total Semester Hours: 3**	 √
Fall Semester MUM 1620 - Audio and Acoustic Fundamentals **3 Credit Hours** MUT 1121 - Music Theory I - Ear Training and Sight Singing **3 Credit Hours** MVV 1211 - Applied Music – Voice I **1 Credit Hour** MUL 1010 - Music Appreciation **3 Credit Hours † ♦ ¶** MUN 1360 - Madrigal Singers I **1 Credit Hour** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 14**	 √ √ √ √ √
Spring Semester MUM 2600 - Recording Techniques I **3 Credit Hours** MUT 1122 - Music Theory II - Ear Training and Sight Singing **3 Credit Hours** MVV 2221 - Applied Music – Voice II **1 Credit Hour** MUN 2361 - Madrigal Singers II **1 Credit Hour** MVS 1016 - Applied Strings – Guitar I **1 Credit Hour** General Education Mathematics Course **3 Credit Hours** General Education Social Science Course **3 Credit Hours** **Total Semester Hours: 15**	 √ √ √ √
Second Year	

Summer Semester MUM 2300 - Introduction to the Music Industry **3 Credit Hours** **Total Semester Hours: 3**	 √
Fall Semester MUM 2601 - Recording Techniques II **3 Credit Hours** MUT 2126 - Music Theory III – Ear Training and Sight Singing **3 Credit Hours** MVS 1016 - Applied Strings – Guitar I **1 Credit Hour** MUN 1710A - Rock and Jazz Ensembles I **1 Credit Hour** MUS 2930 - Music – Special Topics **3 Credit Hours** General Education Science Course **4 Credit Hours** **Total Semester Hours: 15**	 √ √ √ √ √
Spring Semester MUM 2604 - Multi-Track Mixdown (Post Production) **3 Credit Hours** MUT 2127 - Music Theory IV – Ear Training and Sight Singing **3 Credit Hours** MVS 2026 - Applied Strings – Guitar II **1 Credit Hour** General Education Humanities Course **3 Credit Hours** Additional General Education Credits **2 Credit Hours** MUN 1720A - Rock and Jazz Ensembles II **1 Credit Hour** MUN 2361 - Madrigal Singers II **1 Credit Hour** **Total Semester Hours: 14**	 √ √ √ √ √
Total Program Hours: 64	
* Courses with √ can also be used in the Companion Certificate indicated: ATRA - Audio Technology (Recording Arts) (CCC)	

College Credit Certificate

Audio Technology (Recording Arts) (CCC)

Admission Program of Study Code ATRA
State CIP Code 0650060209

Students who successfully complete this program may apply these credits to the Music Production Technology (AS) degree (State CIP Code 1650091300).

Core Courses

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

- ____ ____ Other Approved College Credits (MUL, MUM, MUN, MUS, MUT, MVB, MVK, MVP, MVS, MVV, MVW) **3 Credit Hours**

Total Program Credits Required: 15

Natural Gas Operations and Distribution

Vocational Certificate

Natural Gas Operations and Distribution (PSAV)

Admission Program of Study Code GAS

State CIP Code 0647000002

Basic Skills Requirements: The student must be exempt or attain a **9th grade level** on each section of the TABE exam: Math, Language and Reading.

Core Courses

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

TRA 0080 - Tractor Trailer Truck Driver

320 Clock Hours
(Spring)

This course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety, accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip

preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

TRA 0086 - Tractor Operator

150 Clock Hours
(Fall)

This course is designed to build on the skills and knowledge students learned in the Heavy Equipment Maintenance Technician course for entry into the Heavy Equipment Operations industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study pneumatic and crawler-type tractor operations.

TRA 0650 - Natural Gas Distribution I

75 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance.

TRA 0651 - Natural Gas Distribution II

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Prerequisite(s): TRA 0650

TRA 0652 - Natural Gas Distribution III

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Total Program Hours Required: 1220

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Natural Gas Operations (PSAV)
Fall Semester

TRA 0650 - Natural Gas Distribution I **75 Clock Hours** TRA 0651 - Natural Gas Distribution II **150 Clock Hours** TRA 0652 - Natural Gas Distribution III **150 Clock Hours** TRA 0086 - Tractor Operator **150 Clock Hours** **Total Semester Clock Hours: 600**
Spring Semester TRA 0080 - Tractor Trailer Truck Driver **320 Clock Hours** PMT 0106C - Welder Helper **150 Clock Hours** PMT 0111C - Metal Preparation **150 Clock Hours** **Total Semester Clock Hours: 620**
Total Program Clock Hours: 1220

Network Systems Technology

Associate in Science

Network Systems Technology (AS)

Admission Program Objective Code NSTC
State CIP Code 1511100112

Students may apply selected credits from this program to the requirements of the following college credit certificates: Digital Forensics (CCC) (State CIP Code 0511100119), Network Security (CCC) (State CIP Code 0511100118), Network Server Administration (CCC) (State CIP Code 0511100112), and/or LINUX System Administrator (CCC) (State CIP Code 0511100122).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 1675C - Introduction to IP Telephony

3 Credit Hours
(Fall)

This course explains how companies are using IP Telephony equipment and software to efficiently upgrade existing telephone systems. In addition, the course will give the student a fundamental understanding of the architecture of voice communication and how signaling, call quality and public switched telephone networks operate in a LAN/WAN networking environment. The use of IP Telephony products will be discussed and how software allows companies to cost-effectively upgrade and eventually replace existing (legacy) telephone systems with more cost-effective and easy-to-use telephone equipment.

Prerequisite(s): CET 1600C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2682C - Cisco Voice over IP (VoIP)

3 Credit Hours
(Spring)

Instruction includes, but is not limited to, Voice over Internet Protocol (VoIP) theory, Voice Gateway configuration in a IP Telephony (IPT) solution, IP Phone configuration, design of VoIP networks and troubleshooting IPT networks. Students will design and configure various VoIP networks using case studies and laboratory equipment.

Prerequisite(s): CET 1675C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Systems Technology (AS) (NSTC)
First Year
Fall Semester CET 2660 - Network Security **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

General Education Humanities **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

CET 1610C - Routing Protocols and Concepts **3 Credit Hours**

Science General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

CET 1675C - Introduction to IP Telephony **3 Credit Hours**

CET 1854C - Introduction to Wireless Technology **3 Credit Hours**

Social Science Education Course **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

CET 2682C - Cisco Voice over IP (VoIP) **3 Credit Hours**

Additional General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Program Hours: 60

* Courses with √ can also be used in the Companion Certificate indicated:
* DGFO - Digital Forensics (CCC) *

* NESC - Network Security (CCC)
* NNSA - Network Server Admin. (CCC) *
* NUNX - Linux System Administrator (CCC)

College Credit Certificate

Digital Forensics (CCC)

Admission Program of Study Code DGFO
State CIP Code 0511100119

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology (AS) degree (State CIP Code 1511100112).

Core Courses

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical

concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Technical Elective Courses

Select 8 credits from the following:

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 8

Total Program Credits Required: 32

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Forensics (CCC) (DGFO)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2314C - Network Defense and Countermeasures **3 Credit Hours** CET 2880C - Digital Forensics Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** **Total Semester Hours: 12** **Summer Semester** CET 2881C - Digital Forensics II **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **2 Credit Hours** **Total Semester Hours: 8**

Total Program Hours: 32

LINUX System Administrator (CCC)

Admission Program of Study Code LINU
State CIP Code 0511100122

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology A.S. degree (State CIP Code 1511100112).

Technical Requirements

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise

Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2321 - UNIX Administration

3 Credit Hours
(Offered as needed)

This course is designed for network administrators in a UNIX operating environment. UNIX operating system concepts, architecture and administration will be explored using Linux. Includes shell programming, database managements, rapid application development, and programming tools such as PERL and C++.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CTS 1106

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Linux System Administrator (CCC) (LINU)
Fall Semester CET 1600C - Networking Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CTS 1156C - Desktop Support **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester CET 2615C - LAN Switching and Wireless **3 Credit Hours** CET 2854C - Fundamentals of Wireless LANs **3 Credit Hours** CTS 1106 - Fundamentals of UNIX **3 Credit Hours**

CTS 2321 - UNIX Administration **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 24

Network Security (CCC)

Admission Program of Study Code NESC
State CIP Code 0511100118

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology (AS) degree (State CIP Code 1511100112).

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 24

Technical Elective Courses

Select 6 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- COP 2XXX Any 2000 level COP prefix course **3 Credit Hours**

Total Technical Elective Credits Required: 6

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Security (CCC) (NESC)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester

CET 2892C - Advanced Network Security **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** CET 2685C - Fundamentals of Network Security **3 Credit Hours** **Total Semester Hours: 9**   **Summer Semester** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 30

Network Server Administration (CCC)

Admission Program of Study Code NNSA
State CIP Code 0511100112

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology A.S. degree (State CIP Code 1511100112).

Core Courses

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data

communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2302C - Windows Active Directory

3 Credit Hours
(Spring)

This course focuses on a Windows server directory service environment, including forest and domain structure, DNS, site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user/group/computer account strategies. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2390C - Installing and Configuring Windows Server 2016

3 Credit Hours
(Spring)

This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skill set and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking services, and initial Hyper-V configuration and is also preparation material for, Exam 70-410: Installing and Configuring Windows Server 2016.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Technical Requirement Courses

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2391C - Administering Windows Server 2016

3 Credit Hours
(Spring)

This course is the second in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skills and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server 2016 infrastructure, such as user and group management, network access and data security and is also preparation material for, Exam 70-411: Administering Windows Server 2016.

Prerequisite(s): CTS 2390C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2392C - Configuring Advanced Windows Server 2016

3 Credit Hours
(Summer)

This course is the third in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 Infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2016 infrastructure, such as identity management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance and rights management. This course is also preparation material, and maps directly to, Exam 70-412: Configuring Advanced Windows Server 2016 Services.

Prerequisite(s): CTS 2391C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Requirement Credits Required: 9

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Server Administration (CCC) (NNSA)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 2390C - Installing and Configuring Windows Server 2016 **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2163C - Windows 10 Client Operating System **3 Credit Hours** CTS 2302C - Windows Active Directory **3 Credit Hours** CTS 2391C - Administering Windows Server 2016 **3 Credit Hours** **Total Semester Hours: 12** **Summer Semester** CTS 2392C - Configuring Advanced Windows Server 2016 **3 Credit Hours** **Total Semester Hours: 3**
Total Program Hours: 24

Nursing

Associate in Science

Nursing (AS)

Admission Program Objective Code NURS
State CIP Code 1351380100

This program is a Selective Admission program subject to additional program policies and licensure requirements stipulated in the "Nursing Program Student Handbook." Policies are strictly enforced and students should work with the Nursing Program staff rather than self-advise. The admission criteria and process are subject to change; students should contact the Associate Degree Nursing Program office for the most current information.

General Education

Unless otherwise noted, select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Any core Mathematics course **3 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or PSY 2012 - Psychology **3 Credit Hours ♦**

Total General Education Credits Required: 20

Core Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

NUR 1021C - Nursing Process I

6 Credit Hours
(Fall, Spring)

This course introduces concepts and principles of holistic nursing care. Students will build on knowledge obtained in the biophysical and psycho-social sciences in this first of four required clinical nursing courses in the nursing curriculum. Theory content includes an introduction to healthcare systems ethical-legal aspects of nursing practice, health and illness, communications, functional health patterns of clients, stress-adaptation, professional behaviors, and all steps of the nursing process with emphasis on assessment of older adult clients. Students begin socialization into the role of the Associate Degree Nurse as a member of an interdisciplinary healthcare team.

Prerequisite(s): Admission to the AS Nursing Program, BSC 1085C, ENC 1101, (MAC 1105 OR STA 2023)

Corequisite(s): NUR 1021L

Prereq/Corequisites: BSC 1086C, HUN 2201

Special Nursing Program policies may apply to this course.

NUR 1021L - Nursing Process I Clinical Experience

4 Credit Hours
(Fall, Spring)

This course introduces students to the role of the Associate Degree Nurse in providing direct, holistic nursing care to young, middle-aged and older adults who are hospitalized or in community settings. Students are introduced to all steps of the nursing process with a focus on assessment skills. Students will identify self-learning needs and set their own goals for improvement. Critical thinking and working effectively with peers and other healthcare professionals as a team member is expected. The demonstration of caring behaviors and therapeutic communication as a provider of bedside, technical nursing care is emphasized. Students must demonstrate safe performance of basic nursing skills, including but not limited to medication administration, physical assessment, and comfort care.

Prerequisite(s): Admission to the AS Nursing Program

Corequisite(s): NUR 1021C.

Special Nursing Program policies may apply to this course.

NUR 1141 - Pharmacologic Principles in Nursing I

1 Credit Hour
(Fall, Spring)

This course introduces students to concepts and principles of pharmacology related to safe administration of therapeutic agents within the nursing process framework. Students begin to learn major drug classifications and selected exemplars along with principles of safe, effective administration of drugs. Students will learn dosage calculations, factors that affect the absorption, excretion, distribution, and metabolism of drugs, as well as drug actions, adverse effects, and interactions.

Prerequisite(s): Admission to the AS Nursing Program

Special Nursing Program policies may apply to this course.

NUR 1142 - Pharmacologic Principles in Nursing II

1 Credit Hour
(Fall, Spring)

An introduction to the role of the associate degree nurse in providing direct, holistic nursing care to young, middle-aged and elderly adults who are hospitalized or receiving care in community settings. Emphasis is on applying all steps of the nursing process with focus on assessment skills. Pre-requisite college foundation and nursing courses provide theoretical bases for nursing care. Critical thinking is an expected behavior along with skills in working ethically and effectively with peers and other health care professionals as a team member; demonstrate caring behaviors and therapeutic communication with clients as a provider of bedside, technical nursing care. The student is expected to demonstrate safe performance of basic nursing skills, e.g., medication administration, physical assessment and comfort care of hospitalized adults and nursing home residents.

Prerequisite(s): NUR 1141 or LPN licensure and admission to the Nursing Program

Corequisite(s): NUR 1231C and NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 1231C - Nursing Process II

5 Credit Hours
(Fall, Spring)

Application of the nursing process continues with emphasis on the planning and implementation of nursing care for clients experiencing threats to functional health patterns. Development of professional behaviors, such as developing therapeutic relationships continues with students working clients through life interactions. Students further develop critical thinking skills through case studies and simulation scenarios designed to provide students with problem solving skills in analyzing, planning and prioritizing care for clients whose health problems are more acute or chronic; the client with psycho-emotional dysfunctions, dysfunctional support systems situations, grief, and loss. Students learn basic management skills as a team member caring for a limited number of clients in hospitals with emphasis on coordination of nursing care and discharge planning. Conflict management skills are highlighted as the student increases role as client advocate.

Prerequisite(s): NUR 1021L NUR 1021C and NUR 1141;or LPN licensure; admission to the AS Nursing Program or permission from the program director

Corequisite(s): NUR 1750L and NUR 1142

Prereq/Corequisites: DEP 2004

Special Nursing Program policies may apply to this course.

NUR 1750L - Nursing Process II - Clinical Experience

4 Credit Hours
(Fall, Spring)

This course builds on competencies presented in Nursing Process I regarding the role of the Associate Degree Nurse in providing direct, holistic nursing care for adult clients experiencing dysfunctional health patterns. Clinical experiences in hospitals, clinics, and community settings provide students with opportunities to apply the nursing process in care of clients, including the older adult. Students continue to develop management skills through conflict

management and other professional behaviors. Students demonstrate safe performance of all basic and more complex nursing skills.

Prerequisite(s): NUR 1021L or LPN licensure

Corequisite(s): NUR 1231C.

Special Nursing Program policies may apply to this course.

NUR 2233C - Nursing Process III

6 Credit Hours
(Fall, Spring)

Students continue to use the nursing process and critical thinking with emphasis on primary and secondary prevention as nursing interventions in clients experiencing threats to functional health patterns, including during the childbearing process and children whose normal lines of defense have been invaded by stressors to the degree that hospitalization is necessary. Nursing practice issues continue to focus on ethical-legal issues related to acute and/or chronic illness and disability. Management skills include delegation and career development.

Prerequisite(s): NUR 1231C & NUR 1142 or approval from the program director.

Corequisite(s): NUR 2233L

Prereq/Corequisites: MCB 2010C

Special Nursing Program policies may apply to this course.

NUR 2233L - Nursing Process III – Clinical Experience

4 Credit Hours
(Fall, Spring)

Students continue to apply knowledge and skills learned in previous nursing courses in providing nursing care for the hospitalized child, the family during the maternity cycle, and adults whose health problems are more complex and/or chronic. Clinical sites include hospitals, health departments, clinics, physician offices, schools and other community settings. Conflict resolution skills are applied, as needed, to meet client and/or peer learning goals. Delegation skills with peers are also practiced. Students demonstrate continuation of all previously learned nursing skills and must perform safely all advanced nursing skills in this clinical course.

Prerequisite(s): NUR 1750L

Corequisite(s): NUR 2233C.

Special Nursing Program policies may apply to this course.

NUR 2241C - Nursing Process IV

5 Credit Hours
(Fall, Spring)

Students integrate knowledge and principles of the biophysical and psychosocial sciences to solve life-threatening problems that affect a limited number of critically ill clients in a variety of clinical settings. Students differentiate

holistic nursing care therapies in primary, secondary and tertiary care settings. Students become proficient in applying all steps in the nursing process with emphasis on evaluating nursing care outcomes. Students apply critical thinking skills in exploring case-based practice situations and work together in simulation seminars to select effective client care improvement processes. Self-evaluation is part of the socialization process to prepare students for the work world as competent, caring staff nurses. Nursing practice issues include licensure standards and continued professional development.

Prerequisite(s): Permission from the Director of Nursing or NUR 2233C; MAC 1105 or STA 2023

Corequisite(s): NUR 2241L, NUR 2811L

Prereq/Corequisites: SYG 2000

Special Nursing program policies may apply to this course.

NUR 2241L - Nursing Process IV – Clinical Experience

3 Credit Hours
(Fall, Spring)

Students apply knowledge and principles of the biophysical and psychosocial sciences to assess, plan, implement and evaluate holistic nursing care of critically ill adults in hospitals, ambulatory care settings, and the home. Students will expand on management of care skills in preparation for their four-week clinical practicum prior to graduation from the program. Students will also shadow a home health/hospice nurse in observing treatment and palliative care of adults and children. Other clinical activities will include experiences in the emergency department and critical care units. Students must demonstrate competency in all behaviors required for an Associate Degree Nursing graduate.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2811L

Special Nursing Program policies may apply to this course.

NUR 2811L - Nursing Practicum

3 Credit Hours
(Fall, Spring)

This course is a capstone course and provides a time during the last four weeks of the nursing program in which students begin to transition from the student role into the graduate role as an associate degree nurse. Students attend seminar hours and complete standardized testing for evaluation in proficiency in applying all steps in the nursing process with emphasis on evaluating safe nursing care outcomes. Students complete clinical practice hours with an experienced registered nurse preceptor to provide holistic nursing care for a limited number of clients. The focus is on demonstration of all professional behaviors and competencies expected of the associate degree registered nurse graduate at entry level. Clinical experiences provide hands-on learning opportunities, enhancing clinical thinking, safe nursing judgment, and clinical confidence in skills. Clinical experiences take place in a variety of clinical settings and work schedules.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2241L

Special Nursing Program policies may apply to this course.

LPNs who successfully complete NUR 1142, NUR 1231C, NUR 1750L, NUR 2233C and NUR 2233L will receive credit for NUR 1021C, NUR 1021L, and NUR 1141.

Total Core Credits Required: 52

Technical Electives (Not Required)

NSP 2049L - Nursing Practice Readiness

1 Credit Hour
(Fall, Spring)

This elective laboratory course assists the nursing student to prepare for the RN licensure examination (NCLEX-RN). Web-based instructional methodologies allow the student to complete the course within a self-paced time frame. Students practice test taking skills, self-evaluation and other strategies to gain confidence in sitting for the NCLEX-RN.

Prerequisite(s): NUR 2241C or permission from Nursing Program Director.

Special Nursing Program policies may apply to this course.

NUR 1940L - Nursing Clinical Externship

3 Credit Hours
(Summer)

This elective course is designed to offer students the opportunity to gain additional clinical skills practice during the summer semester. Working with a preceptor and the nursing faculty in area hospitals, clinics, or community settings , the student will be able to perform all skills learned in successfully completed nursing courses.

Prerequisite(s): admission to the AS Nursing Program; NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 2931 - Special Topics in Associate Degree Nursing

1 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2932 - Special Topics in Associate Degree Nursing

2 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree

Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2933 - Special Topics in Associate Degree Nursing

3 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2934 - Special Topics in Associate Degree Nursing

4 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2935 - Special Topics in Associate Degree Nursing

5 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

Total Program Credits Required: 72

Suggested Two Year Academic Plan

This program admits students twice per year to being NUR courses in the fall and spring semesters. Below is a sample academic plan for these students admitted in the identified semester.

Nursing (AS) (NURS)

First Year

Summer or Fall Semester

BSC 1085C - Anatomy and Physiology I **4 Credit Hours ♦**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Mathematics Core General Education course* 3 Credit Hours ♦

Total Semester Hours: 10

Fall or Spring Semester ("Semester 1 in Nursing Program")

BSC 1086C - Anatomy and Physiology II **4 Credit Hours**

HUN 2201 - Nutrition **3 Credit Hours**

NUR 1021C - Nursing Process I **6 Credit Hours**

NUR 1021L - Nursing Process I Clinical Experience **4 Credit Hours**

NUR 1141 - Pharmacologic Principles in Nursing I **1 Credit Hour**

Total Semester Hours: 18

Spring or Fall Semester ("Semester 2 in Nursing Program")

DEP 2004 - Human Growth and Development **3 Credit Hours**

Humanities Core General Education Course **** 3 Credit Hours ♦**

NUR 1231C - Nursing Process II **5 Credit Hours**

NUR 1750L - Nursing Process II - Clinical Experience **4 Credit Hours**

NUR 1142 - Pharmacologic Principles in Nursing II **1 Credit Hour**

Total Semester Hours: 16

Second Year

Fall or Spring Semester ("Semester 3 in Nursing Program")

MCB 2010C - Microbiology, Allied Health **4 Credit Hours**

NUR 2233C - Nursing Process III **6 Credit Hours**

NUR 2233L - Nursing Process III – Clinical Experience **4 Credit Hours**

Total Semester Hours: 14

Spring or Fall Semester ("Semester 4 in Nursing Program") SYG 2000 - Sociology **3 Credit Hours ❖ ♦** or PSY 2012 - Psychology **3 Credit Hours ♦** NUR 2241C - Nursing Process IV **5 Credit Hours** NUR 2241L - Nursing Process IV – Clinical Experience **3 Credit Hours** NUR 2811L - Nursing Practicum **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 72
***** While any Core General Education Mathematics course is acceptable, Statistics (STA 2023) should be strongly considered because it is a required course in the RN to BSN program. ****** AS Core General Education Humanities include the Speaking-Across-the-Curriculum (SATC) requirement. Students who already have a humanities course that does NOT include SATC, may take another humanities course that meets the SATC requirement or a speech course.

Office Administration

Associate in Science

Office Administration (AS)

Admission Program Objective Code OFFA
State CIP Code 1552020401

Students who successfully complete selected technical courses in this program may also be eligible to receive the college credit certificates in Office Specialist (CCC) (State CIP Code 0552040704), Medical Office Management (CCC) (State CIP Code 0551071605), Office Management (CCC) (State CIP Code 05520200401).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles.

A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office

applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Administration (AS) (OFFA)	Companion Certificate*		
First Year	OFSP	MEOM	OFMT
Fall Semester			
Mathematics General Education **3 Credit Hours**			
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**			
CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours**	√ √	√ √	√ √

OST 1107 - Word Processing I **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Spring Semester Science General Education Course **3 Credit Hours** Additional General Education Credits **3 Credit Hours** OST 2117 - Word Processing II **3 Credit Hours** OST 1355 - Records Management **3 Credit Hours** ENC 2210 - Technical Report Writing **3 Credit Hours** **Total Semester Hours: 15**	 √ 	 √ 	 √
Second Year			
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Social Science General Education **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Spring Semester OST 2401 - General Office Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	 √ 	 √ √ 	 √ √
Total Program Hours: 60			

* Courses with √ can also be used in the Companion Certificate indicated: OFSP - Office Specialist (CCC) MEOM - Medical Office Management (CCC) OFMT - Office Management (CCC)			

College Credit Certificate

Office Management (CCC)

Admission Program of Study Code OFMG
State CIP Code 0552020401

Students who successfully complete this certificate may be eligible to receive credits towards the Office Administration (AS) degree (State CIP Code 1552020401).

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other

word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 15

Technical Elective Courses

Select 12 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the

student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 27

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Management (CCC) (OFMT)
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** OST 1107 - Word Processing I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester OST 2401 - General Office Management **3 Credit Hours** OST 2117 - Word Processing II **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 27

Office Specialist (CCC)

Admission Program of Study Code OFSP
State CIP Code 0552040704

Students who successfully complete this certificate may be eligible to receive credits towards the Office Administration (AS) degree (State CIP Code 1552020401).

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 6 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office

applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if

applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Specialist (CCC) (OFSP)
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** OST 1107 - Word Processing I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester OST 1355 - Records Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Paralegal Studies

Associate in Science

Paralegal Studies (AS)

Admission Program Objective Code PARA
State CIP Code 1722030200

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1003 - Introduction to Paralegal Studies

3 Credit Hours
(Fall)

This course is designed to give students a broad understanding of the nature of the paralegal profession and the elements contained within the profession, as well as its responsibility.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1114 - Legal Research and Writing

3 Credit Hours
(Spring)

This course is designed to provide the student with necessary skills and knowledge required in legal research/case analysis and legal writing.

Prerequisite(s): PLA 1003 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1600 - Wills, Trusts, and Probate

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of estate planning, wills, and probate administration.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2273 - Tort Law

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of tort law with objectives centered on personal injury torts.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2949 - Internship - Paralegal

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): completion of a minimum of 12 credit hours in the appropriate discipline, including PLA 1003 and permission of the instructor is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

*This college credit course is not intended for transfer and may not be applied toward the AA degree.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Paralegal Studies (AS) (PARA)
First Year
Fall Semester PLA 1003 - Introduction to Paralegal Studies **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **- 3 Credit Hours** Technical Elective **3 Credit Hours** PLA 1005 - Legal Terminology **3 Credit Hours** OR PLA 1013 - Introduction to the Legal System **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 2241 - Business Law I **3 Credit Hours** PLA 1114 - Legal Research and Writing **3 Credit Hours** Humanities General Education **- 3 Credit Hours** Social Science General Education **- 3 Credit Hours** PLA 1013 - Introduction to the Legal System **3 Credit Hours** OR PLA 1005 - Legal Terminology **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester

PLA 2273 - Tort Law **3 Credit Hours** Science General Education **- 3 Credit Hours** PLA 1600 - Wills, Trusts, and Probate **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Spring Semester PLA 1203 - Civil Procedure **3 Credit Hours** PLA 1800 - Introduction to Family Law **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Radiography

Associate in Science

Radiography (AS)

Admission Program Objective Code RADT
State CIP Code 1351090700

The Radiography program is based on selective admission, subject to additional policies and licensure requirements. Students attend classes at the Niceville Campus, and are assigned to clinical rotations at various healthcare facilities in the district. Graduates are eligible to sit for the ARRT certification exam. For additional information contact the Health Technology Department at (850) 729-6444.

Please note: In order to be a part of the **Radiography program applicant pool**, students must declare Radiography as their intended major on the online admissions application.

General Education

Unless otherwise noted, select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**

- ____ ____ - Humanities **3 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

MAC 1105 - College Algebra , an equivalent, or higher level math course **3 Credit Hours**

Total General Education Credits Required: 20

Core Courses

RTE 1000 - Introduction to Radiologic Technology

2 Credit Hours
(Summer, Offered as needed)

This course is designed to provide an overview of the history of radiography and the role and scope of practice of the practitioner in the healthcare delivery system. Organizations, accreditation, federal agencies, regulatory agencies (including OSHA) and professional credentialing will be discussed. Content includes a fundamental background in medical law, ethics, human diversity and patient consent. The student will examine a variety of ethical issues and dilemmas found in clinical practice, as well as developing a better understanding of patients, the patient's families, and professional peers through comparison of diverse populations based on value systems, cultural and ethnic influences, communication styles and socioeconomic influences. Radiographic medical terminology and pharmacology will be covered. Site specific clinical education paperwork will be completed and students will perform required clinical observations in imaging departments. Background check, drug screening, training and clinical site approval mandatory.

Prerequisite(s): admission to the Radiography Program.

RTE 1111 - Introduction to Radiographic Patient Care

2 Credit Hours
(Fall)

This course is designed to prepare radiography students to provide basic patient care. Basic concepts of patient care will be described, as well as infection control procedures and standard precautions. This course includes hospital specific training. Health risks, life stages, HIV/AIDs and domestic violence will be discussed. This course also includes an introduction to medical and radiographic terminology. Topics include vital signs, venipuncture, body mechanics and transport, verbal/nonverbal communication, and some pharmacology.

Prerequisite(s): admission to the Radiography Program.

RTE 1418 - Radiographic Techniques I

3 Credit Hours
(Fall)

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. This course introduces the student to a comprehensive study and theory of the production of x-rays and primary exposure factors of radiographic imaging. The image parameters of density, contrast, recorded detail, image distortion and blur will be studied as well as ancillary devices and equipment required to produce a quality radiographic image. Digital imaging with related accessories will be emphasized. Class demonstrations and exercises are used to demonstrate application of theory.

Prerequisite(s): MAC 1105 or other Gordon Rule math course and admission to the Radiography Program.

RTE 1457C - Radiographic Techniques II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1418 Radiographic Techniques I. Course content includes the basics of magnetism, electricity, motors, generators, rectifying systems, x-ray tube and filament circuitry. Topics in electromagnetism such as self and mutual induction, high voltage transformation, and AC rectification will be emphasized. An introduction of special radiographic methods will include automatic exposure control, computers, fluoroscopy and image intensification, subtraction radiography, conventional tomography, digital image receptors, and digital image acquisition and manipulation.

Prerequisite(s): RTE 1418.

Corequisite(s): RTE 1513C

RTE 1503C - Radiographic Procedures I

4 Credit Hours
(Fall)

This course is designed to provide the Radiography student with instruction in radiographic examinations of the chest, abdomen, upper extremity and lower extremity. An introduction to medical and radiographic terminology, radiographic anatomy, and image critique are also included.

Prerequisite(s): BSC 1085C and admission to the Radiography program.

RTE 1513C - Radiographic Procedures II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1503C. It is designed to provide the student with instruction in radiographic procedures and anatomy in the distal extremities, hip region, spine, ribs, and sternum and the cranium. Critical thinking, medical and radiographic terminology, as well as image critique are emphasized.

Prerequisite(s): RTE 1503C, RTE 1804L , and BSC 1086C

Corequisite(s): RTE 1814L.

RTE 1804L - Radiography Clinical Education I

3 Credit Hours
(Fall)

This course involves the practical application of the theories covered in RTE 1503C and RTE 1000. Rotations provide experience with various imaging systems, protocols, and patient care. Students observe, assist and perform basic radiographic procedures (chest, abdomen and extremities) under direct supervision. This course emphasizes patient care and critical thinking. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1000

Corequisite(s): RTE 1503C

RTE 1814L - Radiography Clinical Education II

3 Credit Hours
(Spring)

This course is a continuation of Radiography Clinical Education I. This clinical training emphasizes lower and upper extremity. Medical and radiographic terminology, patient care, critical thinking and communication skills are emphasized. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1804L

Corequisite(s): RTE 1513C.

RTE 1824L - Radiography Clinical Education III

4 Credit Hours
(Summer)

This course is a continuation of Radiography Clinical Education II. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I and II. The student will gain experience and develop clinical competence in general radiographic procedures such as the cranium and specialized contrast studies. Advanced

patient care skills, critical thinking, imaging and exposure techniques, radiation protection application and image processing will be emphasized. This rotation covers clinical experience in all phases of fundamental radiologic procedures and image critique. Students will rotate through ancillary departments in this course.

Prerequisite(s): RTE 1814L

Corequisite(s): RTE 2523C.

RTE 2061 - Radiographic Preparation for Practice

4 Credit Hours
(Spring)

This course is designed review information in preparation for the student to take the American Registry of Radiologic Technologist (ARRT) registry examination. The course will cover patient care and education, image production, equipment operation and maintenance, radiographic procedures and radiation protection. The student will also be given simulated registry examinations for practice and assessment purposes.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2854L.

RTE 2385 - Radiographic Protection and Biology

3 Credit Hours
(Fall)

This course is designed to provide the student with an overview of the principles of interaction of ionizing radiation with living systems. Ionizing effects on molecules, cells, tissues and the body as a whole are presented, along with factors affecting biological response, including; acute, chronic, stochastic and non-stochastic effects. This course is also designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and healthcare organizations are incorporated, as are the various methods of monitoring radiation exposure and acceptable dose limit values.

Prerequisite(s): RTE 1000, RTE 1418, RTE 1457C, RTE 2523C

Corequisite(s): RTE 2844L.

RTE 2473 - Radiographic Quality Assurance

2 Credit Hours
(Fall)

This course is designed to introduce the radiography student to evaluation methodology of radiographic systems to assure consistency in the production of quality images. Image critique, fluoroscopy, malfunctions, and specifications are some of the topics covered in the course.

Prerequisite(s): RTE 1418, RTE 1457C

Corequisite(s): RTE 2844L.

RTE 2523C - Radiographic Procedures III

3 Credit Hours
(Summer)

This course is a continuation of RTE 1513C covering cranium procedures and positioning. It is designed to provide the student with instruction in more complex radiographic procedures such as fluoroscopy, urinary studies, bone age, trauma, pediatrics, mobile and surgical radiography. Included is instruction in additional modalities and studies such as CT, MRI, arthography, myelography, and vascular studies. Attention will be given to the specialized equipment, contrast media, critical thinking and techniques necessary to perform these procedures. Radiographic anatomy, pathology, and critique of images are included in this course.

Prerequisite(s): RTE 1513C

Corequisite(s): RTE 1824L.

RTE 2533C - Radiographic Procedures IV

2 Credit Hours
(Fall)

This is a continuation of RTE 2523C, with emphasis on special procedures and additional modalities. Students are required to complete observations hours within specialty areas.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L

RTE 2571 - Introduction to Computed Tomography

1 Credit Hour
(Spring)

This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency.

Prerequisite(s): RTE 1457C

RTE 2782 - Radiographic Pathology

3 Credit Hours
(Spring)

This course is designed to introduce theories of disease causation and the pathophysiologic disorder that compromise healthy persons. Etiology, pathophysiologic responses, clinical manifestations, and radiographic appearance of alterations in body systems will be presented. Emphasis will be placed on pathological findings on diagnostic radiographic images.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2854L.

RTE 2844L - Radiography Clinical Education IV

5 Credit Hours
(Fall)

This course is a continuation of RTE 1824L. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I, II and III. The student will gain experience and develop clinical competence in specialized imaging procedures, and mobile, surgical and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 1824L

Corequisite(s): RTE 2385.

RTE 2854L - Radiography Clinical Education V

5 Credit Hours
(Spring)

This course is a continuation of RTE 2844L. The terminal objective for this course is to prepare the student for employment as an entry level technologist. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I-IV and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2061.

> **All RTE courses must be completed with a grade of 75 or higher to progress in the Radiography Program.**

Total Core Credits Required: 57

Total Program Credits Required: 77

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Radiography (AS) (RADT)
First Year
Summer Semester BSC 1085C - Anatomy and Physiology I **4 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** MAC 1105 - College Algebra **3 Credit Hours ♦**

RTE 1000 - Introduction to Radiologic Technology **2 Credit Hours**

Total Semester Hours: 12

Fall Semester

BSC 1086C - Anatomy and Physiology II **4 Credit Hours**

RTE 1111 - Introduction to Radiographic Patient Care **2 Credit Hours**

RTE 1503C - Radiographic Procedures I **4 Credit Hours**

RTE 1418 - Radiographic Techniques I **3 Credit Hours**

RTE 1804L - Radiography Clinical Education I **3 Credit Hours**

Total Semester Hours: 16

Spring Semester

RTE 1513C - Radiographic Procedures II **4 Credit Hours**

RTE 1457C - Radiographic Techniques II **4 Credit Hours**

RTE 1814L - Radiography Clinical Education II **3 Credit Hours**

DEP 2004 - Human Growth and Development **3 Credit Hours**

Total Semester Hours: 14

Summer Semester

Humanities General Education Course **3 Credit Hours**

RTE 1824L - Radiography Clinical Education III **4 Credit Hours**

RTE 2523C - Radiographic Procedures III **3 Credit Hours**

RTE 2571 - Introduction to Computed Tomography **1 Credit Hour**

Total Semester Hours: 11

Second Year

Fall Semester

RTE 2385 - Radiographic Protection and Biology **3 Credit Hours**

RTE 2473 - Radiographic Quality Assurance **2 Credit Hours**

RTE 2533C - Radiographic Procedures IV **2 Credit Hours**

RTE 2844L - Radiography Clinical Education IV **5 Credit Hours** **Total Semester Hours: 12**
Spring Semester RTE 2061 - Radiographic Preparation for Practice **4 Credit Hours** RTE 2782 - Radiographic Pathology **3 Credit Hours** RTE 2854L - Radiography Clinical Education V **5 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 77

Sports, Fitness and Recreation Management

Associate in Science

Sports, Fitness and Recreation Management (AS)

Admission Program Objective Code SPFR
State CIP Code 1731050701

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

LEI 1544 - Outdoor Recreation Management

3 Credit Hours
(Fall, Spring)

This course examines the fundamental influences on outdoor recreation. The course also provides information on hazards, conservation considerations, and safety factors in planning and organizing outdoor recreations. Basic first aid, CPR, and AED training is incorporated as it pertains to outdoor recreation. Field trips may be assigned as warranted.

PEM 1131A - Strength Training

3 Credit Hours
(Offered as needed)

This course is a high intensity lecture/demonstration and flexible lab hour weight training program designed to increase the size, strength, and endurance of the skeletal muscle system. Instruction includes, but is not limited to, weight training safety, etiquette, history, and nutrition. Instruction will be given in the design of progressive resistance programs to increase total body efficiency and to meet the objectives of the individual student. Students are responsible for determining fitness for training, and those with medical problems which restrict personal activities are encouraged to obtain medical clearance before enrolling in the course.

PET 1000 - Introduction to Physical Education

3 Credit Hours
(Offered as needed)

A study of the history of physical education and sport with particular emphasis placed on present practices and trends.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CLP 1001 - Personal Adjustment

3 Credit Hours
(Fall, Spring, Summer)

Psychology of adjustment, application of psychological theory for problem solving and better mental health. An examination of psychological defense mechanisms and adaptive behavior.

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and

mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PEM 2108 - Fitness Lab

1 Credit Hour
(Offered as needed)

Instruction and participation in an exercise program with emphasis on muscle endurance, strength and flexibility.

Prerequisite(s): HLP 1081 or approved wellness assessment by the department chair.

This course may be taken up to four times for credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ - Selected Activity Courses (PEL, PEM, PEO) **4 Credit Hours**
- ____ ____ - Other Approved College Credits

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Sports, Fitness and Recreation Management (AS) (SPFR)
First Year
Fall Semester HSC 1400 - First Aid **3 Credit Hours** PET 1000 - Introduction to Physical Education **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** General Education Humanities Course **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HUN 2201 - Nutrition **3 Credit Hours** General Education Mathematics Course **3 Credit Hours** General Education Social Science Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester HSC 1100 - Health Education **3 Credit Hours** PEM 1131A - Strength Training **3 Credit Hours** General Education Science Course **4 Credit Hours**

Additional General Education Credits **2 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HLP 1081 - Wellness: Practice and Theory **3 Credit Hours** PET 2622 - Care and Prevention of Athletic Injuries **3 Credit Hours** LEI 1544 - Outdoor Recreation Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Theatre and Entertainment Technology

Associate in Science

Theater and Entertainment Technology - Acting Specialization Option (AS)

Admission Program Objective Code THTA
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Stage Technology (Theater & Entertainment) (CCC) (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2120 - Improvisation

3 Credit Hours
Offered as needed

This course explores the use of creativity and imagination, engaging the actor in a wide variety of improvisational theatre games.

TPP 2141 - Acting in Shakespeare

3 Credit Hours
(Offered as needed)

This course is an introduction to the concepts, principles, and skills needed to develop characters in Shakespeare's plays. The course focuses on the hidden clues in the text to discover character choices and meaning. Specific analysis and the techniques of scansion are introduced as they relate to character interpretation. Application of these techniques will be presented in scenes and monologues.

TPP 2150 - Advanced Scene Study

3 Credit Hours
(Fall)

This course is a continuation of the processes and concepts of TPP 2111, Acting II, with the addition of new techniques to create dynamic and engaging characterizations through performance.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2533 - Stage Combat I (Unarmed & Rapier)

3 Credit Hours
(Spring)

Through in-class study and performance the student will develop an understanding of and proficiency in the safe techniques of unarmed and rapier stage combat which are required of a theatrical performer. Application of these techniques will be presented in two scenes, one for unarmed and one for rapier.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Acting Specialization Option (AS) (THTA)	Companion Certificate*
First Year	
Fall Semester Communications General Education Course **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** THE 2304 - Script Analysis **3 Credit Hours** TPP 2110 - Acting I **3 Credit Hours** SPC 1608 - Public Speaking **3 Credit Hours †** or SPC 2300 - Interpersonal Communication **3 Credit Hours †** **Total Semester Hours: 15**	 √ √ √
Spring Semester TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** TPP 2111 - Acting II **3 Credit Hours** TPP 2220 - Auditioning **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**	 √ √ √
Second Year	
Fall Semester Natural Science General Education Course **3 Credit Hours** TPP 2120 - Improvisation **3 Credit Hours** TPP 2150 - Advanced Scene Study **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** TPP 1190 - Rehearsal and Performance I **3 Credit Hours** **Total Semester Hours: 15**	 √

Spring Semester TPP 2533 - Stage Combat I (Unarmed & Rapier) **3 Credit Hours** TPP 1191 - Rehearsal and Performance II **3 Credit Hours** TPP 2141 - Acting in Shakespeare **3 Credit Hours** TPP 1940 - Internship in Theatre Performance **3 Credit Hours** Social Science General Education Course **3 Credit Hours** **Total Semester Hours: 15**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC)	

Theater and Entertainment Technology - Costuming Specialization Option (AS)

Admission Program Objective Code THTC
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the Stage Technology (Theater & Entertainment) (CCC) certificate (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

HUM 1905A - Independent Study – Arts and Humanities

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue nonscheduled academic and laboratory work which

may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): approval from department chair, a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2331 - Costume Construction

3 Credit Hours
(Offered as needed)

An introduction to costume construction techniques and wardrobe design. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in costume construction.

Prerequisite(s): TPA 2232

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1192 - Rehearsal and Performance III

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1191.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2930 - Theater Performance – Special Topics

3 Credit Hours
(Fall, Spring, Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Costuming Specialization Option (AS) (THTC)	Companion Certificate*
First Year	STGT
Summer Semester	
TPA 1290 - Technical Theatre Lab I **1 Credit Hour**	√
HUM 1905A - Independent Study – Arts and Humanities **1 Credit Hour**	√
Total Semester Hours: 2	
Fall Semester	
Communications General Education Course **3 Credit Hours**	
Speech General Education Course **3 Credit Hours**	

TPP 2110 - Acting I **3 Credit Hours** TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** **Total Semester Hours: 12**	
Spring Semester Social Science General Education Course **3 Credit Hours** TPA 2220 - Lighting Design **3 Credit Hours** TPP 1190 - Rehearsal and Performance I **3 Credit Hours** TPA 2331 - Costume Construction **3 Credit Hours** **Total Semester Hours: 12**	 √ √ √
Summer Semester Natural Science General Education Course **3 Credit Hours** TPP 1191 - Rehearsal and Performance II **3 Credit Hours** **Total Semester Hours: 3**	 √
Second Year	
Fall Semester Mathematics General Education Course **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** THE 2304 - Script Analysis **3 Credit Hours** **Total Semester Hours: 12**	 √
Spring Semester TPA 1291 - Technical Theatre Lab II **1 Credit Hour** TPP 1192 - Rehearsal and Performance III **3 Credit Hours** THE 2300 - Dramatic Literature **3 Credit Hours † ¶** TPA 2063 - Principles of Scenic Design **3 Credit Hours** TPP 2930 - Theater Performance – Special Topics **3 Credit Hours**	

TPA 1940 - Internship in Theatre Design or Production **3 Credit Hours** **Total Semester Hours: 16**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC) (STGT)	

Theater and Entertainment Technology - Dance Specialization Option (AS)

Admission Program Objective Code THTD
State CIP Code 1650050202

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is

required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

Select 33 credits from the following:

DAA 1104 - Modern I for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to affect an understanding of the art of the modern dance. It includes a brief history of the dance; instruction and practice in basic dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time. This course maybe taken 4 times for credit.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1204 - Ballet I for Majors

2 Credit Hours
(Fall, Spring, Summer)

A beginning dance course designed to serve as an introduction to the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1681 - Dance Ensemble

1 Credit Hour
(Fall, Spring)

The student shall participate in the preparation and performance of original dance compositions to include Dance Line and Show Choir performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

(to be completed three times for audit)

DAA 2105 - Modern II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to further the student's understanding of the art of the modern dance. It includes continued study in history of the dance; instruction and practice in intermediate level dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2205 - Ballet II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance course is designed to serve as an further training in the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2610 - Dance Composition

2 Credit Hours
(Fall, Spring)

An introduction and practice in the application of compositional tools encourages the student to explore and compose dance. By studying the body's movement in time and space the student will improve technical skills, develop improvisation and choreographic skills and enhance overall dance performance. Previous dance experience is helpful.

This course may be taken up to four times for credit.

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography)

1 Credit Hour
(Fall, Spring)

This course includes the continuation of study and participation in all rehearsals of selected works of dance repertory and/or original choreography culminating in public performance.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAN 1750 - Dance Conditioning

1 Credit Hour
(Fall, Spring)

Dance Conditioning is an excellent course in which to begin your dance training. It is designed to improve fundamentals for the beginning/intermediate student through daily practice in floor work, yoga, and Pilates exercises. This movement class will get you ready to meet the challenges of other dance classes by toning, strengthening and preparing the body to move.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAN 2120 - Dance Appreciation

3 Credit Hours
(Offered as needed)

This course is a study of the development of dance as an art form, as entertainment, and how it relates to the history of cultures and societies, emphasizing the evolution of dance in the specific genres such as ballet, modern dance, jazz dance, and world dance forms. Designed to heighten student awareness of dance as an integral part of society and establish an appreciation of dance's impact on the making of art. This course will give the student a foundation level understanding of dance as an art form and its historical and cultural significance. The major periods of dance history, master choreographers, and their works will be explored through lecture, discussion and media presentation. DAN 2120 is not an activity course.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Dance Specialization Option (AS) (THTD)
First Year
Summer Semester Communications General Education Course **3 Credit Hours** DAA 1200 - Fundamentals of Ballet **2 Credit Hours** **Total Semester Hours: 5**   **Fall Semester** Mathematics General Education Course **3 Credit Hours** DAA 1104 - Modern I for Majors **2 Credit Hours**

DAA 1204 - Ballet I for Majors **2 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1681 - Dance Ensemble - **Audit**

DAN 1750 - Dance Conditioning **1 Credit Hour**

DAN 2120 - Dance Appreciation **3 Credit Hours**

TPA 1210 - Stagecraft **3 Credit Hours**

Total Semester Hours: 16

Spring Semester

Natural Science General Education Course **3 Credit Hours**

DAA 1104 - Modern I for Majors **2 Credit Hours**

DAA 1204 - Ballet I for Majors **2 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1681 - Dance Ensemble - **Audit**

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography) **1 Credit Hour**

THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**

Total Semester Hours: 14

Second Year

Fall Semester

Humanities General Education Course **3 Credit Hours**

Speech Additional General Education Course **3 Credit Hours**

DAA 1681 - Dance Ensemble - **Audit**

DAA 2105 - Modern II for Majors **2 Credit Hours**

DAA 2205 - Ballet II for Majors **2 Credit Hours**

DAA 2610 - Dance Composition **2 Credit Hours**

DAN 1750 - Dance Conditioning **1 Credit Hour**

Total Semester Hours: 13

Spring Semester

Social Science General Education Course **3 Credit Hours**

DAA 2105 - Modern II for Majors **2 Credit Hours**

DAA 2205 - Ballet II for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography) **1 Credit Hour**

TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**

Total Semester Hours: 12

Total Program Hours: 60

Theater and Entertainment Technology - Music Theater Specialization Option (AS)

Admission Program Objective Code THTM
State CIP Code 1650050202

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed

as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1500 - Jazz I for Non-Majors

1 Credit Hour
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken four times for credit.
(to be completed twice for program credit)

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1680 - Dance Workshop

1 Credit Hour
(Fall, Spring)

This course includes instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

This course may be taken up to four times for credit.
(to be completed four times for **audit**)

- MUN ____ - Music Ensembles (to be completed four times for **audit**)

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MVV 1211 - Applied Music – Voice I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour session per week, with a minimum of one hour daily practice.

This course may be taken up to four times for credit.

MVV 1311 - Applied Music - Voice I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in voice in the freshman year of study as the student's principal performing medium. This one hour weekly lesson is for intended voice majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which four memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVV 2221 - Applied Music – Voice II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour lesson per week, with a minimum of one hour daily practice.

Prerequisite(s): MVV 1211.

This course may be taken up to four times for credit.

MVV 2322 - Applied Music - Voice II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in voice in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended voice majors, and requires Division Chair Approval. A major component of this class is a required juried performance at the end of the semester for which six memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211, MVV 1311 and Division Chair approval.

This course may be taken up to four times for credit.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2250 - Introduction to Musical Theatre

3 Credit Hours
(Fall)

Introduction to the study of Musical Theater analysis, creation, and performance with an emphasis on singing, dancing, and acting.

Total Technical Elective Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Music Theater Specialization Option (AS) (THTM)
Summer Semester Speech General Education Course **3 Credit Hours** DAA 1200 - Fundamentals of Ballet **2 Credit Hours** **Total Semester Hours: 5**
First Year
Fall Semester Communications General Education Course **3 Credit Hours** MUT 1111 - Music Theory I **3 Credit Hours** MUT 1241 - Ear Training and Sight Singing I **1 Credit Hour** DAA 1500 - Jazz I for Non-Majors **1 Credit Hour** DAA 1680 - Dance Workshop - **Audit** MUN XXXX - Ensemble - **Audit** MVV 1211 - Applied Music – Voice I **1 Credit Hour**

TPP 2110 - Acting I **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

Mathematics General Education Course **3 Credit Hours**

DAA 1500 - Jazz I for Non-Majors **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 2221 - Applied Music – Voice II **1 Credit Hour**

THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**

TPP 2111 - Acting II **3 Credit Hours**

TPP 2220 - Auditioning **3 Credit Hours**

Total Semester Hours: 14

Second Year

Fall Semester

Natural Science General Education Course **3 Credit Hours**

MUL 1010 - Music Appreciation **3 Credit Hours † ♦ ¶**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 1311 - Applied Music - Voice I for Majors **2 Credit Hours**

TPA 1210 - Stagecraft **3 Credit Hours**

TPP 2250 - Introduction to Musical Theatre **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Social Science General Education Course **3 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 2322 - Applied Music - Voice II for Majors **2 Credit Hours**

TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**

TPP 1940 - Internship in Theatre Performance **3 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 60

Theater and Entertainment Technology - Technical Theater Specialization Option (AS)

Admission Program Objective Code THTT
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the Stage Technology (Theater & Entertainment) (CCC) certificate (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 2276C - Entertainment Technology - Crafts

3 Credit Hours
(Spring)

This course presents the practices and principles of advanced woodworking, welding, smithing, casting, ceramics, plaster work, fiberglass and plastic technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented that will use items created in a realized production.

Prerequisite(s): TPA 1210.

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2292 - Technical Theatre Lab III

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1291

TPA 2301 - Technical Theatre Lab IV

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 2292

TPA 2343 - CAD for the Theatre

3 Credit Hours
(Offered as Needed)

This course is project oriented covering fundamental through advanced material in computer aided drafting and design and its application for the theatre.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

Total Technical Elective Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Technical Theater Specialization Option (AS) (THTT)	Companion Certificate*
First Year	STGT
Summer Semester Social Science General Education Course **3 Credit Hours** TPA 1290 - Technical Theatre Lab I **1 Credit Hour** **Total Semester Hours: 4**	
Fall Semester Communications General Education Course **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** TPA 2212 - Sound Production for the Stage **3 Credit Hours** TPA 2343 - CAD for the Theatre **3 Credit Hours** THE 2304 - Script Analysis **3 Credit Hours** **Total Semester Hours: 15**	 √ √
Spring Semester	

TPA 1291 - Technical Theatre Lab II **1 Credit Hour** TPA 2063 - Principles of Scenic Design **3 Credit Hours** TPA 2220 - Lighting Design **3 Credit Hours** TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** TPA 2276C - Entertainment Technology - Crafts **3 Credit Hours** **Total Semester Hours: 13**	√ √ √
Second Year	
Fall Semester Natural Science General Education Course **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Speech Additional General Education Course **3 Credit Hours** TPA 2292 - Technical Theatre Lab III **2 Credit Hours** TPP 2110 - Acting I **3 Credit Hours** **Total Semester Hours: 14**	√
Spring Semester General Education Mathematics Course **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** TPA 1940 - Internship in Theatre Design or Production **3 Credit Hours** TPA 2301 - Technical Theatre Lab IV **2 Credit Hours** TPA 2600 - Stage Management **3 Credit Hours** **Total Semester Hours: 14**	√
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC)	

College Credit Certificate

Stage Technology (Theater & Entertainment) (CCC)

Admission Program of Study Code STGT
State CIP Code 0650050201

Students who successfully complete this certificate may be eligible to receive credits towards one of the following Theatre and Entertainment A.S. degree options:

- Theater and Entertainment Technology - Acting Specialization Option (AS) (State CIP Code 1650050202)
- Theater and Entertainment Technology - Costuming Specialization Option (AS) (State CIP Code 0650050202)
- Theater and Entertainment Technology - Technical Theater Specialization Option (AS) (State CIP Code 0650050202)

Core Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

Total Core Credits Required: 17

Total Program Credits Required: 17

Welding

Vocational Certificate

Welding Technology (PSAV)

Admission Program of Study Code WELT
State CIP Code 0648050805

This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

Basic Skills Requirements: The student must be exempt or attain a **9th grade level** on each section of the TABE exam: Math, Language and Reading.

The night welding program is not accepting new students during the 2018-19 academic year.

Core Courses

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

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PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides instruction and demonstration using Shielded Metal Arc Welding (SMAW). Topics include visually inspect of welds, and basic SMAW technical terminology. Basic structural welding techniques will be demonstrated in accordance with American Welding Society (AWS) D1.1 Structural Welding Code. Tack welding and metal joint fit of carbon steel is covered in this course.

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PMT 0122C - Basic Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course introduces structural fillet welds in different joint positions in accordance with AWS D1.1 Structural Welding Code. Fillet welds will be performed on carbon steel plate of various thicknesses.

Prerequisite(s): PMT 0121C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides the student with instruction on joint design, joint preparation, and fit-up, and performance of groove welds with backing. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds with backing and make acceptable groove welds with backing using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0122C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Spring, Summer)

This course provides the student with advanced instruction on joint design, joint preparation, and fit-up, and performance of open groove welds. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of open groove welds and make acceptable open groove welds in all positions using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0126C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0134C - Gas Metal Arc Welding (GMAW)

50 Clock Hours
(Spring, Summer)

This course provides instruction and demonstration using the various transfer methods and techniques of Gas Metal

Arc Welding (GMAW). Topics included are safety, equipment set-up, joint design and preparation, and gases.

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PMT 0145C - Flux-Core Arc Welding (FCAW)

240 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Flux-Core Arc Welding (FCAW) and basic understanding of pipe welding. Welding symbols and blueprint reading are covered in this course.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0155C - Gas Tungsten Arc Welding (GTAW)

160 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to gas tungsten arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Gas Tungsten Arc Welding (GTAW), and basic understanding of pipe welding.

Total Program Hours Required: 1050

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Welding Technology (PSAV) (WELT) - Day Schedule
Fall Semester PMT 0106C - Welder Helper **150 Clock Hours** PMT 0111C - Metal Preparation **150 Clock Hours** PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

Total Semester Clock Hours: 525

Spring Semester

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0134C - Gas Metal Arc Welding (GMAW) **50 Clock Hours**

PMT 0145C - Flux-Core Arc Welding (FCAW) **240 Clock Hours**

PMT 0155C - Gas Tungsten Arc Welding (GTAW) **160 Clock Hours**

Total Semester Clock Hours: 525

Total Program Clock Hours: 1050

Welding Technology (PSAV) (WELT) - Night Schedule

Spring Semester

PMT 0106C - Welder Helper **150 Clock Hours**

PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

Total Semester Clock Hours: 375

Summer Semester

PMT 0111C - Metal Preparation **150 Clock Hours**

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0134C - Gas Metal Arc Welding (GMAW) **50 Clock Hours**

Total Semester Clock Hours: 275

Fall Semester

PMT 0145C - Flux-Core Arc Welding (FCAW) **240 Clock Hours**

Total Semester Clock Hours: 400

Total Program Clock Hours: 1050

Welding Technology - Advanced (PSAV)

Admission Program of Study Code WELA
State CIP Code 0648050806

This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

Core Courses

PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding

200 Clock Hours
(Offered as needed)

This course introduces the student to the practices and procedures of welding carbon steel pipe using the Shielded Metal Arc Weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation and fit-up. Upon completion, students should be able to demonstrate pipe positions, proper electrodes selection, proper joint geometry, joint preparation, fit-up, and proper SMAW pipe welding techniques in accordance with applicable codes.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0171C - SMAW-GTAW Pipe Welding

400 Clock Hours
(Offered as needed)

This course is designed to provide the students with skills in welding carbon steel pipe using Shielded Metal Arc Weld process and Gas Tungsten Arc Weld (GTAW) processes using proper filler metals in the 2G, 5G, and 6G positions. Upon completion, students should be able to perform shielded metal arc welding process and gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in the 2G, 5G, and 6G position in accordance with the applicable code.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0173C - Specialty Pipe Welding

150 Clock Hours
(Offered as needed)

This courses covers advanced pipe welding and is designed to build advanced GTAW skills. This course covers advanced Gas Tungsten Arc Welding (GTAW) on alloy pipe and heavy wall carbon pipe.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 750

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Welding Technology - Advanced (PSAV) (WELA) - Day Schedule
Summer Semester PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding **200 Clock Hours** **Total Semester Clock Hours: 200**
Fall Semester PMT 0171C - SMAW-GTAW Pipe Welding **400 Clock Hours** PMT 0173C - Specialty Pipe Welding **150 Clock Hours** **Total Semester Clock Hours: 550**
Total Program Clock Hours: 750

Welding Technology - Advanced (PSAV) (WELA) - Night Schedule
Spring Semester PMT 0171C - SMAW-GTAW Pipe Welding **400 Clock Hours** **Total Semester Clock Hours: 400**
Summer Semester PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding **200 Clock Hours**

PMT 0173C - Specialty Pipe Welding **150 Clock Hours** **Total Semester Clock Hours: 350**
Total Program Clock Hours: 750

Unmanned Vehicle/Drone

Associate in Science

Unmanned Vehicle Systems Operations - Business Development Specialization (AS)

Admission Program of Study Code DRO2

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear,

quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a

Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 2401 - GIS Applications in Social Science

3 Credit Hours
(Offered as Needed)

This course surveys the use of GIS for solving spatial problems in the social sciences. Examples from the fields of health, economic geography and real estate, housing, transportation, criminology, among others are used to illustrate how spatial techniques are used to address problems in a GIS environment. Special consideration will be given to the data needs of such operations, the implementation of methods in a GIS environment, and understanding the spatial assumptions and issues that underpin analyses.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 17
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Fire/Rescue Specialization (AS)

Admission Program of Study Code DRO1

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with

mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours**

SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Law Enforcement Specialization (AS)

Admission Program of Study Code DRON

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century

based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Payload Specialist Specialization (AS)

Admission Program of Study Code DRO3

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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▲ Technology-Across-the-Curriculum Course

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3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

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PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

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¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

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POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours**

ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 17

Second Year

Fall Semester

POS 1041 - American Government **3 Credit Hours ♦ ¶**

PHY 1020 - Physical Science **3 Credit Hours ♦**

Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

PGY 1801C - Digital Photography I **4 Credit Hours**

Total Semester Hours: 16

Spring Semester

ASC 2564C - Unmanned Vehicle Security **4 Credit Hours**

ASC 2949C - Unmanned Systems Practicum **4 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 62

Developmental Education

Developmental Education Overview

Developmental education courses are designed to improve students' skills and thus prepare them for success in their college level courses, career fields, and/or the workplace. These courses develop students' skills in English, reading and math in addition to SLS 1101 - College Success, a course that improves the more general abilities students need to succeed in college, such as time-management, test-taking, and note-taking.

Free instructional support also is provided with walk-in Math tutoring in the Math Lab and individual tutoring appointments for a variety of subjects in the Academic Success Center. Online tutoring is also available through RaiderNet.

Successful completion of the developmental requirement is defined as:

- A grade of "C" or higher in each required developmental course and
- Attainment of a passing score on each required developmental exit examination.

Students enrolled in developmental courses may, at the same time, take college credit courses for which they are qualified. In this manner, a student may begin earning credits that apply toward his/her program of study while completing developmental requirements.

Placement Testing

A student's placement test scores ensure accurate placement in Developmental courses. However, some students are exempt from placement testing, although they may opt to take the placement test in order to gauge their readiness for college-level work.

Exempt Students

Exempt students are defined by Florida Administrative Code 6A-10.0315 and Florida Statute 1008.30 as Active Duty Military students or students who have graduated from a Florida high school since 2007 and are not required to take a placement test or take Developmental Education courses. Exempt students who choose to take a placement test to measure their college readiness are not bound by the scores to enter developmental education; however, they may elect to enroll in developmental education. See the Placement Chart below for course placement scores. Any advisor or the appropriate department chair can provide the permission required for some courses.

Non-Exempt Students

Non-exempt students whose entry level placement scores are below the levels specified in Florida Administrative Code are required to enroll in the appropriate developmental courses. They must take the placement test and will be placed based on their scores, as outlined in the Placement Chart.

Math Courses Flow Chart

Math Courses Flow Chart

Placement Chart

Math Placement Levels

COURSES	PERT	ACT	SAT Taken prior to 3/1/2016	SAT Taken on or after 3/1/2016
MAT 0018 - Developmental Mathematics I	50-95	< 19 PERT Required	< 440 PERT Required	< 24 PERT Required
MAT 0028 - Developmental Mathematics II	96-113	< 19 PERT Required	< 440 PERT Required	< 24 PERT Required
MAT 0157 - Modularized Developmental Mathematics II	96-113	< 19 PERT Required	< 440 PERT Required	< 24 PERT Required
MAT 0056 - Developmental Mathematics Module	105-109	< 19 PERT Required	< 440 PERT Required	< 24 PERT Required
MAT 1033A - Intermediate Algebra *	114-122	19-20	400-499	24-26
MAC 1105 - College Algebra **STA 2023 - Statistics** **MGF 1106 - Practical Applications of Mathematics** **MGF 1107 - Math in Society**	123-150 (Students scoring a 133 or greater may take the CLM to place in a higher level math course)	21-36 (Students scoring a 21 or greater may take the CLM to place in a higher level math course)	500-800 (Students scoring a 500 or greater may take the CLM to place in a higher level math course)	> 26 (Students scoring a 26.5 or greater may take the CLM to place in a higher level math course)

*Students scoring 110-113 on the PERT Math test may enroll in MAT 1033A if they also enroll in MAT 1033L. Please see an academic advisor.

Reading Placement Levels				
TEST	**ENC 0017 - Integrated Reading and Writing I**	**ENC 0027 - Integrated Reading and Writing II**	**REA 0056 - Developmental Reading Module**	**ENC 1101 - English Composition I**
PERT	50-83	84-105	96-105	106-150 & Writing 103-150

ACT	≤ 18 PERT Required	≤ 18 PERT Required	≤ 18 PERT Required	Reading ≥ 19 & English ≥ 17
SAT - Critical Reading Taken prior to 3/1/2016	≤ 439 PERT Required	≤ 439 PERT Required	≤ 439 PERT Required	440
SAT - Reading Taken on or after 3/1/2016	<24 PERT Required	<24 PERT Required	<24 PERT Required	24 and above

English Placement Levels					
TEST	**ENC 0017 - Integrated Reading and Writing I**	**ENC 0027 - Integrated Reading and Writing II**	**ENC 1101L - English Composition I Lab ***	**LIN 1670 - Writing and Grammar**	**ENC 1101 - English Composition I ***
PERT	50-89	90-102	100-116	103-116 Strongly Recommended	103-150 & Reading 106-150
ACT	≤ 16 PERT Required	≤ 16 PERT Required	≤ 16 PERT Required	17-20	17
SAT - Critical Reading Taken prior to 3/1/2016	≤ 439 PERT Required	≤ 439 PERT Required	≤ 439 PERT Required	440-499	440
SAT - Writing and Language Taken on or after 3/1/2016	<25 PERT Required	<25 PERT Required	<25 PERT Required	25 and above	25 and above

*Students scoring 100-102 on the PERT English test may enroll in ENC 1101 if they also enroll in ENC 1101L. Please see an academic advisor.

Note: Students are required to enroll in the course based on their lowest PERT score in either Reading or English.

Alternative Developmental Instruction

Florida law requires that all students whose placement test scores indicate the need for remediation be given the opportunity to satisfy the remediation requirement through developmental instruction or through alternate instructional options. Examples of alternate options include independent study, non-credit courses, and instruction through other colleges and private providers. Students who elect to pursue one of the alternate options must meet with an Academic Advisor prior to registration in order to discuss the impact of the choice on his/her degree progress.

Repeat Enrollments and Attempts in Developmental Courses

Per Florida Statute, a student is eligible for no more than three attempts to successfully complete a given developmental course. All official enrollments after Summer of 1997 are considered attempts, regardless of the grade received. In documented cases of hardship or extenuating circumstances, an exception to the requirement may be granted. Exceptions must be appealed through the Registrar prior to registration. However, if a withdrawal is processed prior to the close of the Drop/Add period, or if audit status is granted prior to the close of the Drop/Add period, the enrollment will not be counted as an attempt. Students may not audit a developmental course unless advance approval is granted through the Office of Academic Affairs. If a student receives a grade of D, F, W, X, or U in a developmental course, he/she may repeat the course to improve the grade and meet developmental requirements. On the third attempt, however, the student will be awarded the letter grade earned (A, B, C, D, F, S, U, or P) and will not be allowed to withdraw or to re-enroll. The prohibition for re-enrollment extends to any public postsecondary institution in Florida.

Once a student has exhausted his/her course attempts in a given developmental area, the only ways to satisfy the developmental requirement are: a) retake the placement examination and demonstrate a score above the established minimum for that subject area, or b) provide documentation of successful completion of an equivalent or higher-level course at a private postsecondary institution. Students not eligible to re-enroll in a given developmental course may, however, continue enrollment at the college in other developmental courses, or in other courses for which they are eligible. In the latter case, an appeal through Enrollment Services may be necessary to continue enrollment.

3rd and 4th Attempts

Florida Statutes also mandate that after the second attempt in a given developmental course, a student will be required to pay the full cost of instruction (approximately four times the usual matriculation fees) to repeat the course. In documented cases of financial hardship or extenuating circumstances, an exception to the full cost requirement may be granted. Exceptions must be appealed through the Registrar prior to registration.

Alternatives for Students No Longer Eligible for College Developmental Enrollment

Once a student has exhausted their course attempts in a given developmental area, the only ways to satisfy the developmental requirement are a) retake the placement examination and demonstrate a score above the established minimum for that subject area or b) provide documentation of successful completion of an equivalent or higher-level course at a postsecondary institution.

NWF State College is committed to student success and has developed several strategies for students in this circumstance. The student should work closely with an Academic Advisor to identify alternatives for which he/she is eligible and to develop a plan for continued study. These strategies are also appropriate for an individual who is subject to the full cost requirement and is unable to afford the increased cost of enrollment.

1. The student may continue enrollment in other appropriate developmental courses, or continue enrollment in other appropriate developmental and college credit courses and pursue one of or a combination of the following strategies. After an appropriate skill-building effort, the student may then retake the placement exam.
    - Enroll in an appropriate alternate developmental course in the subject area
    - Enroll in an adult basic education class(es) to build skills in the given area
    - Pursue individualized study in the Academic Success Center and/or Math Lab to build skills in the given area
    - Work with a college tutor to build skills in the given area
    - Enroll in a college non-credit basic skill refresher course in the given subject/skill area
    - Attend a Skill Refresher Workshop(s) in the given subject/skill area
2. The student may consider a revised program of study which does not carry a developmental requirement. The college offers several college credit and vocational certificates for which placement testing and developmental instruction are not applicable. Students pursuing an A.S. degree may wish to change to a companion college credit certificate which offers the technical skills needed for employment. After completion of the certificate courses, the student may acquire sufficient skills to perform better on the placement examination and eventually progress to an associate degree program of study. See the "Certificates" section of this catalog.
3. The student may temporarily "stop-out" of credit courses, concentrate on skill development, through his/her own resources, then retake the placement examination.
4. The student may enroll in an equivalent or higher level course in the subject area at another postsecondary institution. Upon successful completion of that course work, the student may transfer the course back to NWF State College and/or re-take the placement exam. Students wishing to pursue this option should work closely with an advisor to be sure the alternate course(s) selected will satisfy the developmental requirement. Ideally, the student should submit a transient study form and secure advance approval. Depending on the nature and level of the transfer course, the student may still need to demonstrate minimum skills through the placement exam.

College and Personal Success Classes

Courses focusing on college and personal success strategies are beneficial to a student's academic career and can be used as an elective in some degree programs. NWF State College offers the following college credit courses:

- SLS 1101 - College Success is a recommended course for all students enrolled in the first level of developmental instruction of reading, mathematics or English, or for any student that is required to take any two or more developmental courses regardless of the level.
- SLS 1201 - Service Learning Seminar is required for Honors Scholarship students.

Adult Education

- ABE
- GED
- ESOL
- Transition to College

NWF State College offers a comprehensive program of non-credit instruction designed to improve the employability and life skills of adult students. Courses are offered in Adult Basic Education (ABE), English for Speakers of Other Languages (ESOL), and GED preparation. Each adult education course is offered for a small set fee each semester, which includes materials and supplies. The adult education program is designed for adults who have academic skills below the ninth grade level, those who do not have a high school diploma or those who have a primary language other than English. Special program emphasis is placed on preparing the student to become college ready. Students enrolled in adult education will receive free transition services to become college ready. These services include preparation for the college placement test, career exploration and assessment, developing a career pathway, financial aid and scholarship assistance, and career readiness skills. Visit the Adult Education/GED Preparation webpage or call the Adult Education Department at (850) 729-5387 for more information.

Adult Basic Education (ABE)

Adult Basic Education (ABE) at NWF State College consists of small group instruction with lab support leading to the mastery of the basic skills needed by adults to function in today's complex society. ABE classes are designed for students who want to improve their basic skills in reading, writing, and mathematics. The curriculum is divided into four literacy levels: beginning, basic, intermediate, and advanced.

General Education Development (GED) Preparation

GED classes prepare students to take the General Education Development examination, which leads to the State of Florida High School Diploma. Instruction is targeted at the secondary level with subject content in the areas of writing, social studies, science, reading, and mathematics.

The NWF State College Testing Center offers the Official GED Examination throughout the academic year. Students must register in advance for the exam and pay an examination fee. Testing is offered at the Niceville Campus.

English for Speakers of Other Languages (ESOL)

ESOL classes are eligible to students who have a primary language other than English. ESOL classes are designed to prepare students to communicate effectively in a multi-faceted society. This course is divided into six literacy levels. Students are administered the Comprehensive Adult Student Assessment Systems (CASAS) test for placement into a literacy level. Course content is compatible with principles of language acquisition for adult learners of English and includes skills useful in both workplace life and academic applications.

Transition Services to Postsecondary Education

College credit transition services are available to GED graduates and adult education students preparing for the GED. College readiness services include the development of a transition plan that includes career assessment, academic tutoring, peer mentoring by college credit students, as well as scholarship, financial aid, and college credit admissions assistance.

Professional and Continuing Education

- Community Education
- Costa Leadership Institute
- Fitness and Wellness
- Jr. Raiders Kid's Programs
- Personal Enrichment
- Online Learning
- Meeting and Special Event Facilities

The Professional and Continuing Education Department at Northwest Florida State College offers a variety of quality non-credit programs. These programs include personal enrichment for the lifelong learner, business skills training for professionals, online classes, special event space rentals, fitness and wellness classes, kid's programs and community programs. Taught by experienced professionals, these programs are for all ages and offered during the morning, afternoon, evening and weekends, convenient for people with busy lives. Our programs are conducted throughout Okaloosa and Walton Counties and include:

Community Education

In partnership with community organizations, ecotourism programs and state/court mandated program (Motorcycle Safety, Advanced Motorcycle Rider, Divorce Classes, Guardianship Classes, Eco Tours with Choctawhatchee Basin Alliance, American Heart Association CPR trainings, and more)

Costa Leadership Institute

The Costa Leadership Institute provides professional and business skills training (Computer/Technology, Leadership, Communications, Preparation Exam/Certification Courses, Certification Exams, Continuing Education Units for Designated Professionals, and more)

Fitness and Wellness

Group aerobic and wellness classes at our Niceville Campus and DeFuniak Springs Center (Ballroom Dancing, Zumba, Tia Chi, Yoga and more). *The Niceville Campus also offers gym memberships to the Raider Wellness Center, Niceville Campus.*

Jr. Raiders Kid's Programs

Summer Kid's On Campus, Sports Camps (June and July Kid's On Campus and basketball, baseball and softball sports campus conducted by NWFSC Raider's coaches)

Personal Enrichment

A variety of non-credit personal enrichment courses are available throughout the year. Topics range from computer skills, finance, consumer education and a variety of courses to meet the needs of the community. Fees vary with the length and type of course offered; most classes are held on the Niceville Campus.

Online Learning

Online workforce training and personal enrichment classes offered through Ed2go

Meeting and Special Event Facilities

Offering meeting and special event facilities at our main campus in Niceville and centers in Fort Walton Beach, Crestview, DeFuniak Springs and South Walton.

Articulation Agreements

- Florida Statewide Articulation for AA Degree
- Local NWF Agreements with Other Institutions
- Local NWF Internal Agreements
- NWF Certificate to AS Degree Career Paths
- Statewide Articulation Agreements

What is an Articulation Agreement?

Florida has instituted a variety of methods to facilitate student transfer of credit, otherwise known as articulation agreements. The Statewide Articulation Manual provides statewide standards for awarding advanced placement credits, high school dual enrollment credit, transfer of credit between institutions, and related topics. The Florida Department of Education, through the Articulation Coordinating Committee (ACC), also facilitates statewide consistency among institutions that award credit for certain professional credentials, such as industry certifications, licenses, and certificates. In addition to statewide articulation agreements, NWF State College has local articulation agreements with various other institutions, as well as internal agreements for specific NWF State College programs.

Florida Statewide Articulation Agreement for AA Degree (State Board of Education Rule 6A-10.024)

Florida Community College **Associate in Arts (AA)** graduates are guaranteed the following rights under the Statewide Articulation Agreement (State Board of Education Rule 6A-10.024):

- Admission to one of the state universities, except to Limited Access* programs.
- Acceptance of at least 60 credit hours by the state university toward the baccalaureate degree.
- Adherence to university requirements and policies based on the catalog in effect at the time the student first entered a community college, provided the student maintains continuous enrollment.
- Transfer of equivalent courses under the Statewide Course Numbering System.
- Acceptance by the state universities of credit earned in accelerated programs (e.g., CLEP, DANTES, AP, PEP, Dual Enrollment, Early Admission and International Baccalaureate).
- No additional General Education Core requirements.
- Advance knowledge of selection criteria for Limited Access* programs.
- Equal opportunity with native university students to enter Limited Access* programs.

Should any guarantee be denied, students have the right of appeal. Each state university, and state college shall make available established appeal procedures through the respective articulation officers. At NWF State College, students may contact the Vice President of Academic Affairs or the Dean of Students.

** Limited Access is the designation given to programs that require additional admission requirements which are more selective than general admission requirements. These may include the following: increased total GPA and test scores; additional courses and prerequisites; and auditions and portfolios.*

NWF State College Certificate to AS Degree Career Paths

Many of the technical certificate programs offered by NWF State College provide the initial step in meeting selected course requirements for an A.S. degree in a related area. Courses from those certificates are the same as or equivalent to comparable courses in the companion degree program. Likewise, courses used in the degree program may be applied to a certificate in a related area; in many cases, completion of the technical courses in the degree program can automatically qualify the student to receive the companion certificate.

A list of all AS degrees and corresponding articulated certificates is shown on the Certificate to AS Degree Career Paths page.

For a side by side view of the AS degrees and corresponding certificates see the AS Degree - Companion Certificates 2017-18 [.pdf]

Local NWF State College Agreements With Other Institutions

Embry-Riddle Aeronautical University and NWF State College

- Admission criteria and transfer of credits -- Embry-Riddle Academic Agreement

Florida A&M University and NWF State College

- NWFSC Associate of Arts degree and Florida A&M University (FAMU) School of Architecture **-** Pre-Architecture Articulation

Florida State University - Panama City and NWF State College

- NWFSC Associate of Arts degree and Florida State University - Panama City - FSU-Panama City Articulation Agreement

NWF2UWF

NWF2UWF Articulation Agreement

The NWF2UWF Program offers collaborative academic advising from UWF Transfer Advisors and an on-site NWF2UWF Program Coordinator located on the NWF State College's Niceville campus. Students will also receive access to UWF services and benefits before they enroll. Students who complete an associate of arts degree at NWF State College are guaranteed admissions at UWF, contingent upon meeting the minimum transfer requirements.

- Admission to UWF with no application fee
- Convenient transfer of academic records and courses from NWF State College
- Affordable bachelor's degree from an accredited and respected public university
- Options to complete a bachelor's degree at one of three University of West Florida's locations:
    - Main Campus - Pensacola
    - Emerald Coast - Ft. Walton Beach
    - Online Campus
- Faculty and staff committed to academic success
- Flexible class schedules to meet busy lifestyles
- Experienced academic advisors to assist in satisfying degree requirements
- Library privileges at both institutions
- UWF email account
- UWF ID card

To participate in a 2UWF Program a student must:

- Meet current admission criteria at a state college partner
- Complete an associate of arts degree with a minimum overall combined 2.0 GPA as computed by UWF. (Individual departmental requirements may be higher)
- Be in compliance with the code of conduct at a state college and is in good academic standing.
- Not attend another institution between the time you graduate from your current state college and enroll at UWF.
- Formally enroll in UWF within one year of having completed an associate of arts degree.

- Not have previously graduated from a state college partner.
- Apply via www.uwf.edu/pathways

University of West Florida and NWF State College

- NWF State College Bachelor of Applied Science in Project Management - Acquisitions (BAS) and UWF Master of Science Degree in Administration -- Acquisition and Contract Administration Articulation Agreement
- NWF State College Bachelor of Science in Education (BSE) Degree and UWF Master's Degree in Exceptional Student Education or Master of Education Degree - Curriculum and Instruction Articulation Agreement

Local NWF State College Internal Articulation Agreements

Internal Articulation Agreements

Public Safety

Law Enforcement and/or Correctional Officer (PSAV) certificates to the Criminal Justice Technology (AS) degree

- Firefighter (PSAV) certificates to the Emergency Administration & Management (AS) degree
- Florida State Fire Marshall Firefighter I Certification to NWF State College course FFP 0010
- Emergency Medical Technician (EMT-Basic) (CCC) and/or Paramedic (EMT-P) (CCC) certificates to the Emergency Medical Services (AS) degree
- American Council on Education Special Forces Advanced Tactical Practitioner/18 Delta to the Paramedic (CCC) certificate

Health Sciences

- Dental Assisting (PSAV) certificate to Health Services Management (AS) degree
    - Students who successfully complete the Dental Assisting program and pass the Dental Assisting National Board (DANB) Certificate (CDA) may apply credits towards the requirements for the Health Services Management AS Degree.
- NWF State College Nursing Department Articulation Plan.
    - LPN to Nursing (AS) degree

Early Childhood Education

- Child Development AS Degree to requirements for the Early Childhood Education, Birth through Four BS degree

Statewide Articulation Agreements

The State Board of Education approved the Statewide Career and Technical Education Articulation Agreements which are based on industry certification. This supports the Department's Next Generation Areas of Focus effort Number 3 —"to expand opportunities for postsecondary degrees and certificates." These agreements are intended to be a minimum guarantee of articulated credit and do not preclude institutions from granting additional credit based on local agreements. Individual agreements are listed below.

Statewide Articulation Agreements

AS to Baccalaureate Degree Articulation Agreements

In Florida, A.S. degree curricula regularly include technical skills and theoretical knowledge, as well as, a required general education component that are designed to prepare an individual either for entry into the workforce or transfer into a related baccalaureate program. It is this combination of theory and practice that distinguishes the A.S. degree from the A.A. degree, with its traditional focus on the liberal arts and sciences. This valuable combination of knowledge and skills need not disqualify A.S. degree courses from transferability. Indeed, the competencies taught in the lower division at two-year colleges often duplicate competencies taught at universities in the upper division (in nursing, for example, or in certain information technology fields). The learning outcomes embedded in the A.S. degree programs often embody similar technical knowledge and skill sets. A complete list of articulated programs and hours can be viewed in the Florida Department of Education Career Ladder Agreements document.

Industry Certification to Associate in Applied Science (AAS) / Associate in Science (AS) Articulation Agreements

There are several acceleration methods associated with Industry Certification. These acceleration opportunities allow students who are progressing to the next level of education to earn a guaranteed number of college credits toward the AAS or AS degree. Each acceleration opportunity requires the student to demonstrate mastery of a specified level of competency. One example of this method is the Gold Standard Articulation Agreement, which includes identified industry certifications. As new agreements are developed they are added to the articulation list.

The Gold Standard Career pathways Articulation Agreements of Industry Certification provides information on the identified industry certifications approved by the Florida State Board of Education. Contact Ms. La'Terica Clark, Coordinator of Career and Technical Education at (850) 729-4956 for specific industry certification articulation options at NWF State College.

ATD to AAS/AS Articulation Agreements

The Applied Technology Diploma (ATD) consists of a course of study that is part of an associate in science (AS) or an associate in applied science degree (AAS), is less than sixty (60) credit hours, is approximately fifty (50) percent of the technical component (non-general education), and leads to employment in a specific occupation. An applied technology diploma program may consist of either clock hour credit or college credit. The transfer of the applied technology diploma to an associate degree is guaranteed for a period of three (3) years following the date of the award of the applied technology diploma. For a listing of specific statewide ATD to AAS/AS articulation agreements approved by the ACC, see: ATD to AAS/AS Articulation Agreements.

High School Career Pathways Programs

To determine competency alignment between secondary and postsecondary programs/courses, Florida Department of Education staff review the secondary curriculum frameworks, textbooks, additional materials and equipment used, and the knowledge and skills sets students acquire in the secondary program. From this information, college administration and faculty determine to which courses and/or programs, if any, the secondary programs can be articulated, and identify what courses a student (having successfully completed a Career Pathways program) may receive upon high school graduation and college enrollment. At NWF State College, students may earn credits through the Jump Start Articulation Agreement program based upon high school coursework completed at a school in Okaloosa or Walton County.

Transfer Agreement with Independent Colleges and Universities in Florida

The Florida College System has a transfer agreement with many of the Independent Colleges and Universities of Florida (ICUF). This allows AA degree graduates to transfer into a private college or university with the guarantee that a student will enter as a junior, receive at least 60 credit hours toward the bachelor's degree, and receive recognition

for the general education core that was completed at an institution within the Florida College System. Most of the 31 ICUF institutions have recognized this agreement. To view a copy of the ICUF articulation agreement with the Florida College System, see: Independent Colleges and Universities Articulation Agreement.

Other Statewide Agreements

The Florida College System also has established articulation agreements with private colleges and other universities. To view specific agreements, see: http://www.fldoe.org/articulation/articulation-agreement.asp.

Accreditations

- Southern Association of Colleges and Schools Commission on Colleges
- Dental Assisting (PSAV)
- Law Enforcement (PSAV)
- Nursing (BSN)
- Paramedic (CCC)
- Welding Technology (PSAV)

College Accreditation

Southern Association of Colleges and Schools Commission on Colleges (SACSCOC)

Northwest Florida State College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate and associate degrees, certificates and diplomas. Contact the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, www.sacscoc.org, or call 404-679-4500 for questions about the accreditation of Northwest Florida State College.

Program Accreditations

Dental Assisting (PSAV)

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted accreditation status of approval with reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: http://www.ada.org/100.aspx.

Law Enforcement (PSAV)

The following NWF State College instructional programs are certified by the Florida Criminal Justice Standards and Training Commission (CJSTC) through the Florida Department of Law Enforcement (FDLE). The programs underwent a re-accreditation review process in 2015 and were all re-certified for a five (5) year period. The Florida Criminal Justice Standards and Training Commission can be contacted at (850) 410-7000. The website for the Criminal Justice Standards & Training Commission is: http://www.fdle.state.fl.us/Content/CJST/Menu/cjst-index/CJSTC-Home-Page.aspx.

- Auxiliary Law Enforcement Officer Basic (PSAV)
- Correctional Officer Basic (PSAV)
- Crossover from Corrections to Law Enforcement Program (PSAV)
- Law Enforcement Officer Basic (PSAV)

Nursing (BSN)

The baccalaureate Nursing program is accredited by the Commission on Collegiate Nursing Education, One DuPont Circle, NW, Suite 530, Washington DC 20036, (202)887-6791. For more information regarding disclosure, please review pages 15-16 of the CCNE Procedures for Accreditation of Baccalaureate and Graduate Degree Nursing Programs (http://www.aacn.nche.edu/ccne-accreditation/Procedures.pdf).

Paramedic (CCC)

The NWF State College Paramedic program is accredited by the Commission on Accreditation of Allied Health Education Programs (http://www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP), Commission on Accreditation of Allied Health Education Programs, 1361 Park Street, Clearwater, FL 33756. Telephone (727) 210-2350.

Welding Technology (PSAV)

The Welding Technology program is accredited by the National Center for Construction Education and Research as a Journey-level Professional Welder. The program's accreditation was most recently awarded during February 2014 and re-evaluation occurs every three years. As the accrediting body for the industry, NCCER establishes the benchmark for quality training and assessments. The National Center for Construction Education and Research can be contacted at (888) 622-3720 or at 13614 Progress Boulevard, Alachua FL 32615. NCCER's web address is: http://nccer.org/new-to-nccer.

Course Descriptions

- All Courses
- Adult Education Courses
- Developmental Education Courses
- Directed Independent Study
- General Course Information
- Lower Division College Credit Courses
- Upper Division College Credit Courses
- Vocational Courses

Courses by Type (Subject Area)

Accounting

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours** ♦, equivalent, or higher

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Adult Basic Education (ABE)

ABX 01__ - Adult Basic Education - Mathematics

The Adult Basic Education (ABE) Mathematics course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ABX 02__ - Adult Basic Education - Reading

The Adult Basic Education (ABE) Reading course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ABX 03__ - Adult Basic Education - Language Arts

The Adult Basic Education (ABE) Language Arts course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

Aeronautical Science

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

Anthropology, Archeology

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ANT 2100 - Introduction to Archaeology

3 Credit Hours ❖
(Offered as needed)

Introduction to the fundamental principles, methods, and theories in archaeology. Includes a history of the development of archaeology, and examination of the nature of archaeological data and research, an introduction to

archaeological data and analysis, and an examination of approaches to synthesis and interpretation. North and South American archeology is studied, but non-western examples are also studied to enhance an understanding of the development of the discipline in Europe and the Americas.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ANT 2159C - Florida Southeast US Archaeology

3 Credit Hours
(Offered as needed)

Introduction to special topics in anthropology and archaeology. Example: field experience in archaeology, brief introduction to prehistoric native American cultures in Florida and the southeastern United States and field experience excavating a prehistoric site in Okaloosa County.

Architectural Drafting

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

BCN 1520 - Electrical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with electrical terminology, practices, methods, code requirements and safety and health in construction.

BCN 1567 - Plumbing and Gas Construction Practices

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with Plumbing and Gas code requirements, terminology, methods, practices, processes and safety and health used in building construction.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

BCN 2560 - Mechanical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with mechanical trades terminology, methods, practices, code requirements processes, and safety and health criteria in mechanical construction.

BCN 2721 - Construction Management/Planning

3 Credit Hours
(Fall, Spring, Summer)

The course covers project development and organization from pre-construction site investigation to final completion. The course will include the management of project estimates, plans, schedules, operations and safety. The student will become knowledgeable about documents used in the construction industry for bid, contracts, zoning, permits, bonds, loans specifications and drawings. Cost engineering, procurement, value engineering and quality assurance will be covered. Cost management through job cost analysis and purchase order systems will also be covered.

BCT 1763 - Construction Safety and Health

3 Credit Hours
(Fall, Spring, Summer)

A basic course in construction safety and health, covering such topics as: theories of accident causation; workplace hazards; hazard analysis and prevention; accident reporting; OSHA construction standard and safety practices; environmental safety; violence in the workplace; ergonomics; ethics and safety; workers' compensation; and stress on the job.

BCT 2761 - Structural Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with structural terminology, practices, methods, code requirements and safety, and health criteria in construction.

BCT 2770 - Construction Estimating

3 Credit Hours
(Fall, Spring)

A course in estimating as it relates to the construction industry covering references, estimating methods, take-off organization and presentation; material take-off, cost estimating in heavy construction, mathematical formulas for estimating, quantity take-off from plan review, and computer estimating overview.

Prerequisite(s): BCN 1230, BCN 1272.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Architecture

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2701 - Survey of History of Architecture, Part I

3 Credit Hours
(Offered as needed)

A critical exploration of the history and theory of architecture from pre-history through the end of the 13th century. Examination of the making and intent of significant buildings and sites tracing the developments that have given meaning to the built environment and brought order to the tectonics of architecture. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Art

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 1750C - Pottery I

3 Credit Hours
(Fall, Spring, Summer)

The students shall be exposed to the production of pottery utilizing all known hand building techniques. Also includes introduction to potter's wheel and basic wheel fundamentals. The first half of course is hand building, the second half is devoted to development of skills on the potter's wheel. Students also learn how to glaze pottery and make glass. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1751C - Pottery II

3 Credit Hours
(Fall, Spring, Summer)

Continues hand building of Pottery I, but major emphasis is placed upon development skills utilizing the potter's wheel. Additional glazing experimentation is also emphasized.

Prerequisite(s): ART 1750C. Please refer to catalog section regarding audit enrollment.

ART 1905A - Independent Study – Art

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy

studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2331C - Figure Drawing II

3 Credit Hours
(Fall, Spring)

This class is a continuation of Figure Drawing I. Emphasis is on composition and self-expression in relation to the human figure. Exploration of media and content will be encouraged.

Prerequisite(s): ART 2330C. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2500C - Painting I

3 Credit Hours
(Fall, Spring)

Course will include design elements, composition and spatial relationships. Emphasis is on color theory, color mixing, and execution thereof within a variety of subject matter. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2501C - Painting II

3 Credit Hours
(Fall, Spring)

This course is a continuation of Painting I ART 2500C with emphasis on further exploration of student's personal style and original techniques. Further experimentation in abstraction and emotional aspects of form and color are explored and expressed.

Prerequisite(s): ART 2500C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2540C - Water Color I

3 Credit Hours
(Fall, Spring)

An introduction to water media techniques applied to various subject matter through demonstrations and various lab experiences. Open to all students. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2541C - Water Color II

3 Credit Hours
(Fall, Spring)

Allows continued experience in more complex water color technique and subject matter. Emphasis is on composition and individual expression.

Prerequisite(s): ART 2540C. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

ART 2701C - Sculpture I

3 Credit Hours
(Spring)

An introductory course in the technical and aesthetic consideration of sculptural forms. Includes a wide range of materials and expressions, representing past and present sculptural methods. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2703C - Sculpture II

3 Credit Hours
(Spring)

Allows continued experience in more complex three-dimensional techniques; emphasis on individual projects and conceptual approach.

Prerequisite(s): ART 2701C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2834C - Gallery Practices

3 Credit Hours
(Offered as needed)

The principles of Art Gallery practices and operations. Both theoretical and practical experiences will be obtained through lectures, field trips and class projects.

ART 2930 - Art - Special Topics

3 Credit Hours
(Fall, Spring Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

ART 2955 - Portfolio Development

3 Credit Hours
(Spring)

Development of a working portfolio through studio project aimed at fulfilling the general requirements the average company, university, art school or advertising agency looks for in a portfolio presentation.

Prerequisite(s): ART 1201C, ART 1203C, ART 1300C, ART 1301C.

Art History

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2060 - Architecture History

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in architecture from prehistoric to modern times. Architecture will be considered in terms of stylistic qualities, structural type, and intended usage. Topics will be addressed according to historical content, societal background, and geographical location. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2930 - Art History – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

Astronomy

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Biology

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1080 - Essentials of Anatomy and Physiology

3 Credit Hours
(Fall, Spring)

This course surveys basic structure and function of the human body with emphasis on terminology and anatomy.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 1905 - Independent Study – Biology

1 Credit Hour
(Fall, Spring, Summer)

A course designed to (1) allow a student to complete part of a course taken elsewhere and thereby complete general education requirements, (2) to go deeper into special areas of interest.

This course may be taken up to four times for credit.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

Botany

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

Business

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1214 - Business and Supervision Terminology

2 Credit Hours
(Fall)

This course is designed for students to achieve mastery of the special vocabulary, jargon, and concept terminology associated with general business and supervision in the modern workplace. Students will apply the terms in common workplace scenarios and hypothetical situations, as well as in standard written documents and assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 1942 - Internship Business

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2947 - Academic Learning Field Studies I

1 Credit Hour
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2948 - Academic Learning Field Studies II

2 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2949 - Academic Learning Field Studies III

3 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3930 - Business Project and Acquisitions Terms and Concepts

1 Credit Hour
(Fall)

Students will apply specialized terminology of project and acquisitions management in various communication venues including short written documents and summary analyses. Emphasis will be placed upon the latest terms, abbreviations and jargon applicable to the field. Students will research selected terms and concepts in various contemporary periodicals and publications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3933 - Business Research

1 Credit Hour
(Fall)

This seminar-style course, offered in group or individual format, provides an introduction to various references, databases, periodicals, journals and other publications essential to the research of contemporary business issues; also included are methods of accessing resources via the Internet, designing search strategies, citing Internet resources and evaluating research materials.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4454 - Business in a High Technology Environment

3 Credit Hours
(Spring)

Presents the special challenges and opportunities of managing a high technology firm or a traditional entity operating in the high technology environment; addresses software/information security, recruiting technical personnel, outsourcing, equipment security, updating equipment, telecommuting and similar issues.

Prerequisite(s): upper division standing and GEB 3031 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4930 - Special Topics: Project Management

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4933 - Special Topics: Management

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4934 - Special Topics: Business Administration

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) from the area of business administration in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4941 - Internship: Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 2401 - GIS Applications in Social Science

3 Credit Hours
(Offered as Needed)

This course surveys the use of GIS for solving spatial problems in the social sciences. Examples from the fields of health, economic geography and real estate, housing, transportation, criminology, among others are used to illustrate how spatial techniques are used to address problems in a GIS environment. Special consideration will be given to the data needs of such operations, the implementation of methods in a GIS environment, and understanding the spatial assumptions and issues that underpin analyses.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

TRA 3132 - Procurement Management

3 Credit Hours
(Offered as Needed)

Purchasing is required by all types of goods-producing & service-providing organizations in such sectors as manufacturing, agriculture, health care, & government. This professional business function tries to buy the right good or service at the right quality, in the right quantity, at the right time, at the right price, from the right source, with delivery at the right place.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

TRA 4203 - Principles of Logistics

3 Credit Hours
(Offered as Needed)

Overview of logistics function within a firm and in the context of integrated vertical systems. Topics include customer service, information flow, inventory control, materials management, order processing, packaging, physical distribution.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Business Law

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4931 - Acquisition Law Seminar

3 Credit Hours
(Spring)

This course addresses contract law as applicable to formation and administration of contracts with private and governmental agencies, with emphasis on the federal government. The following topics are also included: concepts of responsiveness and responsibility, bidding procedures, mistakes, negotiation procedures, changes, claims and dispute resolution. Students will explore the typical contracting problems that can lead to litigation.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Chemistry

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

Chinese

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

CHI 1121 - Mandarin Chinese II

4 Credit Hours
(Spring)

This course is a continuation of Mandarin Chinese I with additional vocabulary and grammar. Pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language.

Prerequisite(s): CHI 1120 or an equivalent course with a minimum grade of "C".

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Coaching

PEO 2004 - Theory and Practice of Teaching a Specific Sport

3 Credit Hours
(Offered as needed)

This course is designed to provide knowledge of the rules, teaching progressions and strategies for competition. The course includes acceptable behavior and ethics for coaches. This course will be offered for the following specific sports: baseball/softball, basketball, football, golf, soccer, swimming, tennis, track and field/cross country, volleyball and wrestling.

PEO 2005 - Coaching Theory

3 Credit Hours
(Offered as needed)

This course is designed to provide knowledge of the characteristics, principles, ethics, and theories related to coaching sports in educational and recreational settings. Emphasis is placed on preparing coaches to train athletes to achieve optimal levels of performance.

College Success

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 1201 - Service Learning Seminar

1 Credit Hour
(Offered as needed)

A seminar course designed to enhance and reinforce the value of civic responsibility and to provide students with a community service program opportunity by volunteering in community agencies in the public and private sectors.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking

skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Computer Science

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CAP 2762 - Data Mining

3 Credit Hours
(Offered as needed)

This course offers exploration of data mining methodologies. Topics may include decision tables, decision trees, classification rules, association rules, clustering, statistical modeling, and linear models and will focus on data warehousing, data mining and data drilling.

Prerequisite(s): CGS 2541 or any programming language are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 1675C - Introduction to IP Telephony

3 Credit Hours
(Fall)

This course explains how companies are using IP Telephony equipment and software to efficiently upgrade existing telephone systems. In addition, the course will give the student a fundamental understanding of the architecture of voice communication and how signaling, call quality and public switched telephone networks operate in a LAN/WAN networking environment. The use of IP Telephony products will be discussed and how software allows companies to cost-effectively upgrade and eventually replace existing (legacy) telephone systems with more cost-effective and easy-to-use telephone equipment.

Prerequisite(s): CET 1600C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student

proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2682C - Cisco Voice over IP (VoIP)

3 Credit Hours
(Spring)

Instruction includes, but is not limited to, Voice over Internet Protocol (VoIP) theory, Voice Gateway configuration in a IP Telephony (IPT) solution, IP Phone configuration, design of VoIP networks and troubleshooting IPT networks. Students will design and configure various VoIP networks using case studies and laboratory equipment.

Prerequisite(s): CET 1675C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2905 - Independent Study, Computer Engineering

1 Credit Hour
(Offered as needed)

This is a directed study course to provide computer engineering students with individual projects designed to meet specific needs in areas of computer engineering technology for which present course availability is limited.

Prerequisite(s): instructor or departmental chair approval. Knowledge of basic computer and keyboarding skills are strongly recommended.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2941 - Computer Engineering Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2942 - Computer Engineering Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1843 - Introduction to E-Commerce

3 Credit Hours
(Offered as needed)

This course is designed to provide students with an overview of the dynamics of electronic commerce and how it links information technology to business objectives. Course may not transfer to all State University System institutions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of

modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface

development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2658 - Advanced Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the advanced IOS programming topics and provides a broad perspective of the IPhone SDK platform. It begins with an overview of the Objective-C language and progressed into the advanced details of the UIKit, as well as several other frameworks essential for advanced development of the iPhone and iPad.

Prerequisite(s): COP 2654 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2662 - Advanced Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches advanced concepts and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devises and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2143C - CompTIA Server+

3 Credit Hours
(Spring)

This course provides advanced concepts in server hardware components and troubleshooting in a non-vendor-specific environment. Introduction to server installation, server storage concepts, administering services, server roles, virtualization, performance monitoring, security, data protection, and maintenance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2302C - Windows Active Directory

3 Credit Hours
(Spring)

This course focuses on a Windows server directory service environment, including forest and domain structure, DNS, site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user/group/computer account strategies. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2321 - UNIX Administration

3 Credit Hours
(Offered as needed)

This course is designed for network administrators in a UNIX operating environment. UNIX operating system concepts, architecture and administration will be explored using Linux. Includes shell programming, database managements, rapid application development, and programming tools such as PERL and C++.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CTS 1106

▲Technology-Across-the-Curriculum Course.

CTS 2346C - Windows Server 2016 Administrator

3 Credit Hours
(Offered as needed)

This course will provide students with the opportunity to develop the skills required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data. Recommended knowledge level: A+, Network +, Security + and Win client operating system. This course prepares the student for the MCITP exam.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2347C - Windows Network Infrastructure 2010

3 Credit Hours
(Spring)

This course addresses the configuration of Windows Server network infrastructure. Topics covered include: routing and remote access, network access protection, network authentication, IPv4 and IPv6 addressing, DHCP, DNS, WINS, DFS, IPSec, and security. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2390C - Installing and Configuring Windows Server 2016

3 Credit Hours
(Spring)

This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skill set and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking services, and initial Hyper-V configuration and is also preparation material for, Exam 70-410: Installing and Configuring Windows Server 2016.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2391C - Administering Windows Server 2016

3 Credit Hours
(Spring)

This course is the second in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skills and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server 2016 infrastructure, such as user and group management, network access and data security and is also preparation material for, Exam 70-411: Administering Windows Server 2016.

Prerequisite(s): CTS 2390C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2392C - Configuring Advanced Windows Server 2016

3 Credit Hours
(Summer)

This course is the third in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 Infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2016 infrastructure, such as identity management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance and rights management. This course is also preparation material, and maps directly to, Exam 70-412: Configuring Advanced Windows Server 2016 Services.

Prerequisite(s): CTS 2391C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2437 - Administering SQL Server Database

3 Credit Hours
(Offered as needed)

This course provides students with the skills required to install, configure, administer and troubleshoot the client-server database management system of Microsoft SQL Server. This is preparation for the MCP exam, an elective requirement for Windows MCSA/MCSE.

Prerequisite(s): CTS 1134 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2438 - Advanced SQL Server Database

3 Credit Hours
(Offered as needed)

This course provides students with advanced topics required to install, configure, administer and troubleshoot the client-server database management system of Microsoft SQL Server. This course is designed to prepare the student for certification, an elective requirement for the Windows MCSA/MCSE.

Prerequisite(s): CTS 2437 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2440 - Introduction to Oracle

3 Credit Hours
(Offered as needed)

An introduction to Oracle and the design and creation of relational databases (using Oracle). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL) integrated into Stored Procedures, Functions, Packages and Triggers (PL/SQL Programming).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ISM 3220 - Network Technologies for Information Professionals

3 Credit Hours
(Fall)

This course is designed to give the student an understanding of the various networking technologies and their practical application in the management of a business. The course also covers the technical issues involved in designing and implementing an efficient network for voice, data, and information networks.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3232 - Software Essentials

3 Credit Hours
(Fall)

This course covers a broad range of software topics as they apply to software management and systems analysis and design. Topics include, but are not limited to programming, the systems development life cycle (SDLC), systems management, interface design and Internet technology.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3323 - Applications in Information Security

3 Credit Hours
(Spring)

This course helps develop the important security concepts relative to software application development and access control that provide the knowledge and skills necessary for the successful management of information security in an organization. Students will understand the environment where software is designed and developed as well as the critical role software plays in providing security to an organization's information systems. The course focuses on software development concepts that relate to security, and how access control methodologies fit into the entire enterprise architecture.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4480 - Electronic Commerce Systems and Strategies

3 Credit Hours
(Offered as needed)

This course is designed to familiarize the student with the management approach to defining and implementing e-commerce (EC) systems. The course addresses the digital economy, EC strategy and marketing, EC models (Business to Business, Business to Consumer, etc.) as well as EC architectures. The course will cover management and regulatory issues in EC such as internationalization, electronic payment methods, Internet fraud, mobile e-commerce, and current implementation technologies. Architectures and inter-dependence (i.e. integration) of systems will be covered.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4930 - Special Topics - Technology Management

3 Credit Hours
(Offered as needed)

This is an individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): Upper division standing and permission of instructor.

This course may be taken up to two times for credit.

ISM 4931 - Internship - Technology Management

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): upper division standing and permission of instructor.

Corrections

CJK 0340 - Corrections PSAV Physical Fitness

30 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Criminal Justice

CCJ 1010 - Introduction to Criminology

3 Credit Hours
(Spring)

A study of the nature and causes of crime and delinquency; the development of delinquent and criminal behavior; theory development in criminology, crime rates and trends, victimology and particular crime pattern areas.

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CCJ 1941 - Internship – Criminal Justice

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Permission of the instructor

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CCJ 2509 - Introduction to Gangs and Crime

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of street gangs, the social factors, and the general classifications necessary for the law enforcement, corrections, and public safety professional. This course explores the history, membership, activity, current trends, and influence of street gangs. Students will be challenged to define community-based solutions and strategies to combat the criminal activity associated with street gangs.

CCJ 2934 - Special Topics in Criminal Justice

2 Credit Hours
(Fall, Spring, Summer)

This course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

*This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CJC 2000 - Introduction to Corrections

3 Credit Hours
(Fall)

Theories of punishment and incarceration; the organization of correction programs and institutions, principles of probation and parole, role of parole and probation officers, legal implications; and problems of rehabilitation are covered. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJE 1642C - Introduction to Crime Scene Technology

3 Credit Hours
(Fall, Spring, Summer)

This course explains and discusses the principals and theories in crime scene technology. The course covers specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence, gunshot residue, blood splatter and bodies.

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2300 - Police Administration and Organization

3 Credit Hours
(Fall, Spring, Summer)

This course presents the principles of organization and administration in law enforcement including functions and activities, planning and research, public relations, personnel and training, inspection and control, records and communications and custody.

CJE 2330 - Ethics in Criminal Justice

3 Credit Hours
(Fall, Spring, Summer)

This course is a detailed exploration of ethical issues in Criminal justice with special emphasis on morality and the law, human behavior, and ethical decision making in law enforcement, corrections and the courts.

CJE 2400 - Police and Community Relations

3 Credit Hours
(Fall, Spring, Summer)

A study of the relationship of the Justice Administration agencies to the surrounding community. Examines the effect of social change and the consequences that it produces upon law enforcement, corrections, and the courts.

CJE 2600 - Criminal Investigations

3 Credit Hours
(Offered as needed)

Fundamentals of investigation; duties and responsibilities of the detective; interrogation techniques; search and techniques of protecting the crime scene; collection and preservation of evidence; modus operandi systems; scientific aids and other sources of information; court preparation and case follow-up.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

CJJ 1002 - Juvenile Delinquency

3 Credit Hours
(Offered as needed)

A study of the nature and cause of juvenile delinquency, the development of the delinquent and criminal behavior, specific criminal justice subsystem (law enforcement, judicial, corrections) problems dealing with juvenile delinquents from initial contact through final disposition and treatment. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJK 0001 - Introduction to Law Enforcement

12 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to law enforcement, the process for becoming a certified law enforcement officer, and the requirements of the academy program. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0012 - Legal

63 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to the criminal justice system, the chain-of-command system in law enforcement, Constitutional Law, Florida Statutes, and the Police Code of Ethics. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0013 - Interactions in a Diverse Community

42 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enhance student awareness and understanding of human diversity issues and to teach students skills to enable them to effectively interact with people of diverse backgrounds. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0014 - Interviewing and Report Writing

54 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to help the student learn vital communication skills including interviewing, note-taking, statement taking, and report writing. It also helps the student to develop survival skills, stress management skills, and problem solving skills utilizing the SECURE model. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0064 - Fundamentals of Patrol

36 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to understand Community Oriented Policing and how it is implemented as a problem solving model, and identify the SECURE problem solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, maintain mental and physical fitness; respond to a call, approach a suspect, make an arrest, transport a prisoner and process the prisoner at a detention facility; and understand how to direct traffic, how to enforce traffic citations, identify how to respond to alarms and conduct a building search, and search inventory and impound vehicles. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0065 - Calls for Service

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to respond to calls for service, disturbances, people in distress and court orders. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0077 - Criminal Investigations

51 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond appropriately to a person or property crime victim, witness, and suspect; conduct a preliminary investigation on crimes against persons and crimes against property offenses; conduct a follow-up investigation to establish a suspect's identity and/or ascertain facts of the case; and, give testimony in different types of court proceedings. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0078 - Crime Scene to Courtroom

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond to a crime scene, protect and survey a crime scene, process a crime scene, dust for latent prints, and document a crime scene by sketching. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0084 - DUI Traffic Stops

33 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective DUI stops, including identifying a driver under the influence of alcohol and drugs, conducting field sobriety tests, and completing a DUI investigation. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0087 - Traffic Stops

30 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective traffic stops, including ethical consideration, safety considerations, citation and warning procedures, and dealing with abandoned vehicles. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0088 - Traffic Crash Investigations

33 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0092 - Critical Incidents

45 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to identify the crowd control procedures to safely and effectively disperse or control a large group of people; understand local emergency response plans; respond to a bomb threat, assesses the scene, search and evacuate a building or suspected bomb sight, identify Weapons of Mass Destruction and properly respond to a WMD incident. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0096A - Criminal Justice Physical Fitness I

31 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0096B - Criminal Justice Physical Fitness II

32 Clock Hours
(Fall, Spring, Summer)

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CJK 0300 - Introduction to Corrections

33 Clock Hours
(Offered as needed)

This course introduces students to the legal and ethical responsibilities of a correctional officer. Legal terms and definitions are explained. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0305 - CJSTC Communications

42 Clock Hours
(Offered as needed)

This course covers the entire report writing process. Topics include interview and interrogation, interpersonal communication, and practical exercises. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0310 - Officer Safety

12 Clock Hours
(Offered as needed)

Correctional officer safety procedures are learned. Students will learn to identify potential hazards and learn how to safely respond. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0315 - Facility and Equipment

12 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for inspecting a correctional facility and equipment. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0320 - Intake and Release

18 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for admitting and releasing inmates in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0325 - Supervising in a Correctional Facility

42 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for supervising inmates in a correctional facility. They also learn to detect crimes and rule violations in various correctional facility settings. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0330 - Supervising Special Populations

21 Clock Hours
(Offered as needed)

Students learn how to identify and supervise special population groups, such as threat groups, juveniles, elderly, and mentally ill inmates. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0335 - Responding to Incidents and Emergencies

18 Clock Hours
(Offered as needed)

Students learn how to identify and respond to situations involving escapes, riots, bomb threats, fires, and medical emergencies in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical

exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0780 - Cross-Over Law Enforcement to Corrections

16 Clock Hours
(Offered as needed)

This course is a component of the Corrections Cross-Over Basic Recruit Academy. This course is designed to enhance Law Enforcement recruits' awareness and understanding of corrections and to teach student skills which will enable them to cross-train into the corrections profession. This course includes classroom instruction. This course is open only to students who have successfully completed the Law Enforcement Basic Recruit Academy and passed the state certification examination for Law Enforcement.

Prerequisite(s): Law Enforcement Basic Recruit Training Program.

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CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2130 - Criminal Evidence and Procedure

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of criminal procedure particularly applied to search and seizure and evaluation of evidence.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

Dance

DAA 1100 - Fundamentals of Modern Dance

2 Credit Hours
(Fall, Spring,, Summer)

This beginning dance class serves as an introduction to the art of contemporary dance. It includes instruction and practice in basic modern dance techniques, improvisation, dance forms and brief historical overview.

This course may be taken up to four times for credit.

DAA 1101 - Modern Dance II for Non-Majors

2 Credit Hours
(Fall, Spring, Summer)

This course includes a continued analysis of the modern dance at an intermediate level. Instruction and practice in specific contemporary dance techniques and performance qualities will be stressed.

This course may be taken up to four times for credit.

DAA 1104 - Modern I for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to affect an understanding of the art of the modern dance. It includes a brief history of the dance; instruction and practice in basic dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time. This course maybe taken 4 times for credit.

This course may be taken up to four times for credit.

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1201 - Ballet II for Non-Majors

2 Credit Hours
(Fall, Spring, Summer)

Intermediate Ballet is designed to train the student in the tradition of the art of the classical ballet beyond the basics. Continued development of the body as an expressive instrument for ballet movement will be stressed as students reach the proficiency level necessary to perform the more complicated steps of an intermediate class.

This course may be taken up to four times for credit.

DAA 1204 - Ballet I for Majors

2 Credit Hours
(Fall, Spring, Summer)

A beginning dance course designed to serve as an introduction to the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1500 - Jazz I for Non-Majors

1 Credit Hour
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken four times for credit.

DAA 1500A - Beginning Jazz

1 Credit Hour
(Fall, Spring, Summer)

This course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken up to four times for credit.

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.

DAA 1521 - Tap II

1 Credit Hour
(Fall, Spring)

The Tap II dance class includes a more in-depth history of tap dance, instruction and practice utilizing tap and exploring its various styles.

Prerequisite(s): DAA 1520.

This course may be taken up to four times for credit.

DAA 1580 - Musical Theater Dance I

1 Credit Hour
(Summer)

This beginning course covers the study of musical theater dance techniques and styles as related to a specific performance experience, usually Creative Dramatics. Students must participate in designated rehearsals and performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 1680 - Dance Workshop

1 Credit Hour
(Fall, Spring)

This course includes instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

This course may be taken up to four times for credit.

DAA 1681 - Dance Ensemble

1 Credit Hour
(Fall, Spring)

The student shall participate in the preparation and performance of original dance compositions to include Dance Line and Show Choir performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2105 - Modern II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to further the student's understanding of the art of the modern dance. It includes continued study in history of the dance; instruction and practice in intermediate level dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2205 - Ballet II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance course is designed to serve as an further training in the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2505 - Jazz II for Majors

2 Credit Hours
(Fall, Spring)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time. This course may be taken 4 times for credit.

Prerequisite(s): DAA 1504

DAA 2581 - Musical Theater Dance II

1 Credit Hour
(Summer)

The continued study of Musical Theater dance techniques and styles as related to a specific performance experience, usually Summer Ensemble Workshop. Students must participate in rehearsals and performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2610 - Dance Composition

2 Credit Hours
(Fall, Spring)

An introduction and practice in the application of compositional tools encourages the student to explore and compose dance. By studying the body's movement in time and space the student will improve technical skills, develop improvisation and choreographic skills and enhance overall dance performance. Previous dance experience is helpful.

This course may be taken up to four times for credit.

DAA 2682 - Dance Workshop II

1 Credit Hour
(Fall, Spring)

This course includes continued instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

Prerequisite(s): A demonstration of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography)

1 Credit Hour
(Fall, Spring)

This course includes the continuation of study and participation in all rehearsals of selected works of dance repertory and/or original choreography culminating in public performance.

This course may be taken up to four times for credit.

DAN 1750 - Dance Conditioning

1 Credit Hour
(Fall, Spring)

Dance Conditioning is an excellent course in which to begin your dance training. It is designed to improve fundamentals for the beginning/intermediate student through daily practice in floor work, yoga, and Pilates exercises. This movement class will get you ready to meet the challenges of other dance classes by toning, strengthening and preparing the body to move.

This course may be taken up to four times for credit.

DAN 2120 - Dance Appreciation

3 Credit Hours
(Offered as needed)

This course is a study of the development of dance as an art form, as entertainment, and how it relates to the history of cultures and societies, emphasizing the evolution of dance in the specific genres such as ballet, modern dance, jazz dance, and world dance forms. Designed to heighten student awareness of dance as an integral part of society

and establish an appreciation of dance's impact on the making of art. This course will give the student a foundation level understanding of dance as an art form and its historical and cultural significance. The major periods of dance history, master choreographers, and their works will be explored through lecture, discussion and media presentation. DAN 2120 is not an activity course.

Dental Assisting

DEA 0020 - Pre-Clinical Procedures Theory

60 Clock Hours
(Offered as needed)

This course is designed to provide an introduction to the dental assisting profession to include orientation to four handed dentistry and general dental office procedures including, but not limited to basic principles of disease prevention, patient data collection and assessment, and instrumentation. Emphasis is on adhering to safety guidelines as specified by OSHA.

Corequisite(s): DEA 0020L.

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DEA 0020L - Pre-Clinical Practice Lab

90 Clock Hours
(Offered as needed)

This is a comprehensive chair side competency based course. The course provides the skills practice necessary for dental assisting students entering four handed dentistry practice including but not limited to infection control, taking and recording vital signs, assisting with operative procedures, principles of preventive dentistry, instrument identification, and use and maintenance of equipment. Emphasis is on aseptic technique and clinical competency with procedures performed in a contemporary dental practice.

Corequisite(s): DEA 0020, DES 0103L.

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DEA 0130 - Oral Pathology

30 Clock Hours
(Offered as needed)

This course is a general study of the scientific and clinical concepts that include additional knowledge base necessary to the practice of dental assisting. Students will study the normal and abnormal conditions of the oral cavity such as dental caries prevention, the dental caries process and recognition of various common pathological conditions. Oral

pathology, histology and embryology are included. Emphasis is on the interrelationship of the information presented with the clinical practice of dental assisting.

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DEA 0803L - Clinical Practice I

150 Clock Hours
(Offered as needed)

This competency based clinical course provides a real world setting in which to integrate the laboratory and clinical skills learned in the classroom. The student receives closely supervised hands on training in chair side dental assisting through rotations at community dental offices. Progress is evaluated using predetermined competency guidelines. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 90 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Corequisite(s): DEA 0020, DEA 0020L.

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DEA 0851L - Clinical Practice III

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice II, providing a real world setting for students to practice the training and clinical skills learned in class including x-ray film placement and cone positioning. The student is assigned to various offices in the community including specialty offices and general dentistry offices. Students assist the dentist and staff with various function of a Dental Assistant at a more advanced level of proficiency. Students must provide their own transportation and must have current CPR training along with up-to-date immunizations. Specific procedure requirements and 180 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DEA 0852L, DES 0205, DES 0205L.

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DEA 0852L - Clinical Practice II

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice I. It provides a real world setting for students to receive additional training in the clinical skills learned in class. Students are assigned to various offices in the community including but not limited to general dentists, oral surgeons, orthodontists, periodontists, and endodontists. Performance evaluations are utilized to measure competency and provide feedback from the local dental offices to the instructor regarding the students' competency level. Skills are strengthened in Seminar Lab. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 150 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DES 0400

Corequisite(s): DES 0830, DES 0830L.

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DEA 0936 - Dental Assisting Seminar

60 Clock Hours
(Offered as needed)

This course is designed to provide a review of materials commonly covered on the Dental Assisting National Board (DANB) Exam. Topics include but are not limited to infection control, general chair side procedures, and radiographic technique. The seminar will provide a mock board examination, and opportunities for review, problem solving, and strengthening skills. The course also serves as an opportunity for feedback from students' Clinical Practice.

Prerequisite(s): DEA 0852L, DEA 0803L, DES 0205, DES 0205L

Corequisite(s): DEA 0803L, DES 0206L.

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DES 0103 - Dental Materials

60 Clock Hours
(Offered as needed)

This course is a comprehensive study of the theory of manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. The competency based lab that accompanies this course includes exercises to illustrate application and use of selected materials. Students will study various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, as well as acrylic plastics. Students will become familiar with various pieces of dental laboratory equipment and their uses.

Corequisite(s): DES 0103L, DEA 0020L.

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DES 0103L - Dental Materials Lab

90 Clock Hours
(Offered as needed)

This course is a comprehensive study of the manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. Emphasis is on practical application as it relates to the role of the dental assistant in the contemporary dental practice. It is a competency based lab that accompanies the theory course and includes exercises to illustrate application and uses of selected materials. Students practice the use of various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, and acrylic plastics.

Corequisite(s): DES 0103, DEA 0020L.

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DES 0205 - Dental Radiology Lecture

60 Clock Hours
(Offered as needed)

This course is designed to introduce the theory, application and principles of radiographic exposure and processing techniques used in dentistry. Students will receive instruction including but not limited to historical data, radiation safety, exposure, processing, mounting and error prevention. Image interpretation of radiographic anatomical structures will be included.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205L.

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DES 0205L - Dental Radiology Laboratory I

60 Clock Hours
(Offered as needed)

This laboratory course assists students in radiographic performance techniques using DXTR manikins to achieve competency prior to exposure of various patients with varied dentitions. Students practice exposing, mounting, radiographic interpretation, safe darkroom procedures, identification of landmarks and distinguishing radiographic

pathology from normal landmarks. Clinical radiographic skills necessary to produce diagnostic quality radiographs including bitewings, periapical radiographs, and panoramic x-rays will be covered. Emphasis is on patient and operator safety guidelines and producing diagnostic quality radiographs.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205.

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DES 0206L - Dental Radiology Laboratory II

60 Clock Hours
(Offered as needed)

This laboratory course assists students in additional radiographic performance techniques to include surveys on patients with varied dentitions. Students practice more advanced radiographic exposure techniques, interpretation, additional darkroom procedures, identification of landmarks and distinguishing various radiographic pathology. Clinical radiographic skills necessary to produce diagnostic quality x-rays including but not limited to bitewings, periapical radiographs, and panoramic surveys on actual patients will be covered. Emphasis is placed on patient and operator safety guidelines and producing diagnostic quality radiographs during this course.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L, DES 0205L

Corequisite(s): DEA 0851L.

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DES 0324 - Interpersonal Communications Skills

30 Clock Hours
(Offered as needed)

This course is designed to implement interpersonal and effective communication skills in the practice of dentistry. It includes team building strategies, oral and written communications skills with the correct use of terminology commonly used in dentistry. Professionalism in verbal and nonverbal communications is emphasized. Students will be introduced to the legal and ethical scope of responsibilities for dental assistants and interpersonal relations in the dental office. Providing oral health instructions and post operative instructions for patients will be introduced. Scenario-based role playing is used to augment student learning of course content.

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DES 0400 - Dental Anatomy

90 Clock Hours
(Offered as needed)

This course provides a detailed study of the orofacial and related structures of the head and neck including, but not limited to the eruption, identification and function of the human dentition, study of bony, circulatory, muscular and nervous systems of the head, neck and surrounding structures associated with the oral cavity. A brief introduction to oral histology and embryology will be included.

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DES 0501 - Dental Practice Management

60 Clock Hours
(Offered as needed)

This course includes theory and content relating to practical administrative duties performed in the dental office. Lectures and role playing activities are related to the responsibilities of the dental assistant. Topics include but are not limited to appointment scheduling, billing, collections, record keeping, clerical and dental supply inventory. Students are introduced to the use of dental practice software with hands on computer experience. Legal responsibilities, interpersonal relations, and interview skills are included.

Prerequisite(s): DES 0205, DES 0205L

Corequisite(s): DEA 0936.

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DES 0602 - Pharmacology and Dental Office Emergencies

30 Clock Hours
(Offered as needed)

This course is designed to familiarize the dental assisting student with the basic concepts and considerations regarding pharmacology and pharmaceutics used in dentistry. Topics presented include nitrous oxide monitoring, emergency procedures and protocol. Lectures will include recognition of emergency conditions in the dental office, not limited to syncope, anaphylaxis, and cardiovascular incidents. Emphasis is placed on the role of the dental assistant in the prevention and management of dental office emergencies.

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DES 0830 - Expanded Function Theory

30 Clock Hours
(Offered as needed)

This course introduces the dental assisting student to the dental specialty practices and more advanced clinical skills. It also provides the theory of dental specialty practice administration as it relates to the role of the dental assistant including ethical and legal ramifications. Lectures relate topics including but not limited to dental specialty procedures, instruments used in the specialty practices and duties delegated to dental assistants according to the rules and regulations of the Florida Dental Practice Act. Role playing and problem solving activities using case studies relate to duties delegated to dental assistants.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830L.

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DES 0830L - Expanded Functions Lab

60 Clock Hours
(Offered as needed)

This laboratory course accompanies the clinical practice lecture course DES 0830 and provides opportunity for students to practice application of the duties delegated to dental assistants according to the Florida Dental Practice Act. Students become more proficient in more advanced skills. Competencies containing information and behavioral objectives allow students to master each skill before advancing to the next.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830.

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DES 0844 - Infection Control for Dental Assistants

30 Clock Hours
(Offered as needed)

This course is a general study in biomedical sciences of preventive dentistry to familiarize the dental assisting student with basic principles of microbiology, basic body structures, and their functions and effects as manifested in the oral cavity. The course also covers the effects of nutrition and the role of microorganisms in dental health and blood borne pathogens.

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Domestic Security

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that

assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front

end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

Drafting and Design

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

EGN 1130C - Descriptive Geometry

3 Credit Hours
(Fall, Spring, Summer)

Covers basic principles of orthographic projection, auxiliary views and rotation as they apply to points, lines and planes in space; addition of coplanar and non-coplanar vectors; intersections and developments; and selected abstract, exponometric and oblique projection, and practical problems.

Prerequisite(s): EGN 1111C or equivalent.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1801C - Technical Illustration

3 Credit Hours
(Fall)

The purpose of this course is to help students develop the skills, knowledge, and attitudes necessary to be job entry-level qualified as technical illustrators.

Prerequisite(s): ETD 1112 or EGN 1130C, and ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETD 2218 - Geometric Dimensioning and Tolerancing

4 Credit Hours
(Fall, Summer)

An introductory course in geometric dimensioning and tolerancing using the geometric method nationally accepted according to ASMEY 14.5M. Topics covered include: definition and terms, symbols, datum referencing, locational tolerancing, form tolerancing, profile tolerancing, orientation and runout tolerancing, and math for positional tolerancing.

Prerequisite(s): ETD 1217 or equivalent.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of

parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

ETD 2735 - Mechanical Drafting III

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include: isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, and precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 2218 and ETD 2731 or equivalent.

ETD 2802C - Technical Illustration II

3 Credit Hours
(Spring)

The purpose of this course is to help students develop advanced skills, knowledge, and attitudes necessary as technical illustrators, to include oblique, and axiometric projections, perspective and exploded pictorial drawings, and related techniques.

Prerequisite(s): ETD 1340C or equivalent.

ETD 2905 - Independent Study – Drafting

1 Credit Hour
(Fall, Spring, Summer)

Practical treatment of special geometry, graphics, and design with emphasis on individual work projects utilizing such graphical techniques as orthographic projection, perspective drawing, auxiliary views, topographic drawing, and graphing.

Prerequisite(s): EGN 1111C and ETD 1112 or permission of instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
* This course may be taken up to four times for credit.

ETG 1941 - Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

Early Childhood Education

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1401 - The Family In Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

This course is comprehensive in scope, emphasizing skills and concepts of parenting which include: adjustment to parental roles; parent-child communication, care, growth, and development of children; cultivating strong families; special concerns; alternative family structures; educational institutions working effectively with parents; and agencies and legislation affecting children and parents.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEC 3213 - Teaching the Language Arts In Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on the development of language and literacy in children ages birth through age four. Emphasis will be placed on understanding the process of emergent literacy including vocabulary and language, phonological awareness, print knowledge and comprehension; and on designing a developmentally appropriate language arts program in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3227 - Art, Music, and Movement

3 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of the creative developmental process in the life of children from birth through four years old. Emphasis will be placed on the teacher's role in developing opportunities and materials for young children to express themselves creatively through music, drama, dance and two- and three-dimensional art and on providing varied opportunities for young children to gain an appreciation of art, music, drama, and dance in ways that reflect cultural diversity in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies

3 Credit Hours
(Offered as needed)

This course is designed to prepare students to teach social studies In the early childhood classroom. Emphasis is on implementing the project approach to investigate components of social studies to include: individual development and identity; people, places, and environments, technology and our world; and civic ideals and practices. The student will increase and apply knowledge and skills in the Florida Early Learning and Developmental Standards relevant to this content area.

EEC 3511 - Curriculum for Infants and Toddlers

3 Credit Hours
(Offered as needed)

The focus of this course will be on the design, implementation and evaluation of programming and curriculum that promotes growth and development of young children birth to three years old and aligns with the early learning and developmental standards. Study of typical and atypical development will be included. Emphasis will be on working effectively with families of infants and toddlers.

EEC 3524 - Professionalism/Program Development

4 Credit Hours
(Offered as needed)

Focus of this course will be on management and leadership in early childhood education programs. Topics will include mentoring adults, professional development, staff assessment, program evaluation, and child advocacy. Career options in the field of early childhood education will be explored. This course will require observing and participating in a program or agency related to early childhood education.

EEC 4404 - Families and Diversity

3 Credit Hours
(Offered as needed)

This course will focus on building positive relationships with families through communication and involvement. Focus will include developing an awareness of diversity and multicultural considerations in working with families of young children. The course will explore the role of the family and the influence of the community on the development of young children in a diverse society; and will prepare the student to work effectively with families and communities.

EEC 4421 - Teaching Math and Science in Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of how concepts, skills and attitudes in early childhood mathematics and science are developed in young children ages birth through age four. Math topics will include number sense and operations, patterns, geometry, and measurement. Science topics will include scientific inquiry, physical science, life science and earth science. Emphasis will be on the alignment of the Early Learning and Developmental Standards with a developmentally appropriate approach to teaching math and science in the early childhood classroom. This course will require observing and participating in an early childhood classroom.

EEC 4613 - Systematic Observation and Assessment

3 Credit Hours
(Offered as needed)

The focus of this course will be on understanding the purpose of child assessment, implementing developmentally appropriate practices in formal and informal child assessment, and using assessment results to support learning, to identify special needs, to evaluate programs, and to respond to program accountability requirements. A field experience is required to practice various methods of assessment in an early childhood setting.

EEC 4940 - Internship

9 Credit Hours
(Fall, Spring)

Supervised teaching in an assigned Early Childhood Education setting. Student teaching assignments will be made by the Department of Teacher Education Office. This course requires a minimum grade of "C". Current background check (fingerprinting) is required for this course.

Prerequisite(s): Upper Division standing with permission of Department Chair

EEX 3604 - Classroom Management in Early Childhood Education

3 Credit Hours
(Offered as needed)

The focus of this course is on implementing effective classroom management practices including establishing an appropriate physical environment, setting up appropriate classroom routines and rules and creating a positive classroom community. Emphasis will be on strategies for guiding children's behavior, teaching social problem-solving skills and responding appropriately to challenging behaviors.

EEX 4201 - Young Children with Special Needs

3 Credit Hours
(Offered as needed)

The focus of this course will be on working with young children birth through age four in an inclusive early childhood classroom. Emphasis will be on identifying typical and atypical development, creating an inclusive early childhood learning environment, understanding special education law, developing an awareness of resources for inclusive practice to meet the needs of young children and their families.

Earth Science

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

Economics

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Education

EDE 4223 - Integrating Art, Music, and Physical Education

3 Credit Hours
(Summer)

This integrative course provides students with critical understanding of art, music, and physical education. Emphasis is placed on the effective integrative lesson planning and modeling techniques to art, music, and physical education in elementary schools. This course requires a minimum grade of "C".

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4226C - Integrated Language Arts, Social Science and Literature

3 Credit Hours
(Fall, Spring)

This course is designed to prepare candidates to teach language arts and social science in elementary classrooms. Teacher candidates will develop units of study that integrate literature, language arts, with social science content. Emphasis is on constructivist principles and methodology. Teacher candidates will plan and deliver standards-based language arts and social science lessons designed to meet the needs of diverse learners including English language learners (ELLs) and students with exceptionalities. This course requires 18 hours of field experience in a K-6 classroom setting. Current background check (fingerprinting) acceptable to the district in which the field experience will take place is required for this course. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4930C - Seminar in Elementary Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace. Includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EDF 1005A - Introduction to the Teaching Profession - A

3 Credit Hours
(Fall, Spring, Summer)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. This course is intended for those students that are not planning to enter a degree program leading to teacher certification. An additional fingerprinting cost may be associated with this course. If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

EDF 1006 - Field Experience in Education

1 Credit Hour
(Offered as needed)

This Educational Field Experience course allows students to work in an educational setting for a semester to meet requirements for admission to the BSE program. This course requires a minimum grade of "C". Current background check (fingerprints) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): permission of department chair.

EDF 1006A - Field Experience in Education

2 Credit Hours
(Offered as needed)

This Educational Field Experience course allows students to work in an educational setting for a semester to meet requirements for admission to the BSE program. This course requires a minimum grade of "C". Current background check (fingerprints) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): permission of department director.

EDF 2085 - Introduction to Diversity for Educators

3 Credit Hours
(Fall, Spring)

This course will provide the student with the opportunity to explore personal values and attitudes toward cultural diversity. Designed for the prospective educator, the theoretical component will examine the issues of teaching in culturally diverse classrooms. An eighteen-hour field experience and examination of educational materials will enhance the student's understanding of multiculturalism. An additional fingerprinting cost may be associated with this course. This course requires a minimum grade of "C" if used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3910A - Projects in Teacher Education

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of Teacher Education students completing an artifact required in the B.S.E. program. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

EDF 3910P - Projects in Teacher Education – Field Placement

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of Teacher Education students completing field experience in the B.S.E. program. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410 - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring) Online Only

Practicing teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. This course is restricted to practicing teachers.

Prerequisite(s): upper division standing.

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 4940 - Internship

9 Credit Hours
(Offered as needed)

Supervised teaching in a public or private school. Student teaching assignments will be made by the department of teacher education field placement coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing with permission of department chair.
EDE 4223, EDE 4226C, EDF 3214, EDF 3430, EDG 3410C, EDG 3343, EEX 3070, LAE 4343C, MAE 3350C, RED 3309C, RED 3511C, RED 4312, RED 4519C, SCE 3350C, TSL 3081C, TSL 4140C

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EME 2040 - Introduction to Technology for Educators

3 Credit Hours
(Fall, Spring Summer)

This course will develop competencies necessary to integrate technology into classroom instruction. Students will survey a variety of instructional technology materials, software, and systems, as well as learn to use these in the classroom environment. This course requires a minimum grade of “C” if used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

EVR 3949 - Extended Internship, Environmental Science

4 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved

projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum Grade of "B" in any college-level science course and permission of instructor.

LAE 4343C - Writing Across the Curriculum

3 Credit Hours
(Offered as needed)

This course prepares pre-service teachers by developing an understanding of the foundations of writing through the use of writers workshops and instructional strategies necessary to provide adequate instruction to emergent, novice, and transitional writers. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4312C - How Children Learn Math

3 Credit Hours
(Offered as needed)

This course is designed to develop the skills and concepts necessary to deliver the mathematics curriculum effectively in the classroom. The content strongly reflects the curriculum emphases of the National Council of Teacher of Mathematics, and topics are presented using a process-oriented approach. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4930C - Seminar in Math Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in mathematics, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4940C - Teaching Methods in Middle Grades Math Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4945 - Internship - Middle Grades Math

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Math in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430 , EDG 3410C, EDG 3343, EEX 3070, EME 3410C, MAC 2312, MAD 3107, MAE 3350C , MAE 4312C, MAE 4940C , MHF 4404, MTG 2206, RED 3324C, RED 3335C, STA 2023, and TSL 3081C

RED 3309C - Early and Emergent Literacy K-2

3 Credit Hours
(Fall, Spring)

This course is designed to increase the understanding of early literacy development and the conditions which promote total literacy from birth through lower elementary grades. Language theory and current research are used to shape informed practices regarding literacy development. Connections are made among all aspects of literacy learning: reading, writing, listening, speaking and attitude development. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3511 - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/ literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a minimum grade of "C" or better and is restricted to practicing teachers.

Prerequisite(s): RED 3309C and upper division standing

Prereq/Corequisites: EDG 3410C, EDG 3343

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4312 - Integration of Assessment into Classroom Reading

3 Credit Hours
(Summer)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on integrating assessments into the curriculum to strengthen instructional strategies and student success. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): RED 3309C, RED 3511C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4519C - Diagnostic and Instructional Interventions in Reading

3 Credit Hours
(Fall, Spring)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on diagnosis of reading problems, administration of assessments, evaluation of results and planning instructional interventions to remediate reading difficulties. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4854C - Reading Field Experience

2 Credit Hours
(Fall, Spring)

This course provides application of knowledge of reading development to reading instruction. Emphasis is placed on increased reading proficiency for struggling students, including students with disabilities and students from diverse populations. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C, RED 4312, RED 4519C, upper division standing with permission of department chair

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4930C - Seminar in Science Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in science, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching science in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4945 - Internship - Middle Grades Science

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Science in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.

EDF 3214, EDF 3430, EDG 3343, EDG 3410C, EME 3410C, EEX 3070, ESC 1000, EVR 3949, ISC 4145, MET 1010C, RED 3324C, RED 3335C, SCE 3350C, SCE 4940C, TSL 3081C, and CHM 1020 or PHY 1020

TSL 3081 - TESOL Issues and Practices

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C." Neither field experience or a background check/fingerprinting are required for current teachers enrolled in this course.

Prerequisite(s): Upper division standing

Prereq/Corequisites: EDG 3410C, EDG 3343

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 4140C - ESOL Methods, Curriculum and Assessment

3 Credit Hours
(Fall, Spring)

This course is designed to build on the candidate's knowledge of applied linguistics and cross cultural communication. Candidates will extend their understanding of the role of language and culture in the classroom. This course will prepare candidates for effective planning, instruction, and assessment of ELLs in the classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): TSL 3081C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

Electronics

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

EET 1141C - Solid State Electronics

3 Credit Hours
(Fall, Spring)

This is the third course required for Electronics Aide certificate. This course introduces the student to the concept, components, and uses of solid state electronics. Topics include semiconductor devices; thyristors and diodes, transistors, amplifiers, power supplies, oscillators, and optoelectronics. The use of capacitors and inductors in solid state electronics will be also covered. The design, set-up, and troubleshooting solid state circuits and devices using various power supplies and function generators will be dispersed throughout the class.

Prerequisite(s): EET 1025C

EET 1180C - Industrial Electronic Troubleshooting

3 Credit Hours
(Fall, Spring)

This course covers troubleshooting procedures for a variety of electronic equipment and circuits common to industrial applications. The student will develop and implement trouble shooting protocols and plans, equipment monitoring plans, a preventive maintenance plan, and select appropriate test and monitoring equipment. Safety in an industrial setting will be stressed and reinforced through a series of lab exercises throughout the course.

Prerequisite(s): EET 1084C

EET 2155C - Linear Integrated Circuits

3 Credit Hours
(Fall, Spring)

This course covers the fundamentals and applications of linear integrated circuits and operational amplifiers. The course covers includes inverting and non-inverting amplifiers, comparators, signal generators, differential and instrumentation amplifiers, operational amplifier specifications, active filters, modulator-demodulator integrated circuits, timers, analog to digital converters (ADC), and digital to analog converters (DAC) and measurement and analysis of linear circuits and devices.

Prerequisite(s): EET 1015C, EET 1025C

ETS 1511C - Motors and Controls

3 Credit Hours
(Fall, Spring)

This course explores the theory and application of AC and DC motors, types of single-phase motors, three-phase power, three-phase motors, remote and local control, forward and reversing motor starters, and various motor control circuits. Wiring and troubleshooting exercises of electric three-phase motor control circuits are emphasized in a wide range of applications.

Prerequisite(s): EET 1084C

Environmental Sciences

ENV 4610 - Sustainable Logistics

3 Credit Hours
(Spring)

This course introduces students to current and future trends in logistics technology, policy and sustainability. Topics include, source sustainability, environmental impacts of existing and emerging technologies, and local environmental conditions and the global climate.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1940 - Internship, Environmental Science

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum grade of "B" in any college level science course and permission of instructor.

Engineering Technology

EEL 2603C - Robotics-Mechanics and Controls

3 Credit Hours
(Fall)

This course introduces the student to robotics. Instructional topics will include robot classifications, applications, Input/Output (I/O) and sensor interfacing.

Prerequisite(s): ETS 1542C

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course,

the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

ETI 4205 - Applied Logistics

3 Credit Hours
(Offered as Needed)

Introduction to logistics. Emphasis on practical applications. Includes systems engineering, cost/ systems effectiveness, reliability, maintainability, system functional analysis, logistic support analysis, life cycle cost analysis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

ETM 1315C - Hydraulics & Pneumatics Fundamentals

3 Credit Hours
(Spring)

This course introduces the student to basic hydraulic and pneumatic fundamentals. Instructional topics will include components, fluid pressure and flow and basic circuit design and application.

ETS 1542C - Introduction to Programmable Logic Controllers

3 Credit Hours
(Fall)

This is an introductory course in Programmable Logic Controllers (PLCs.) The student will learn basic concepts with a focus on programming and practical applications.

Prerequisite(s): EET 1084C

English

CRW 2001 - Creative Writing I

3 Credit Hours
(Fall, Spring, Summer)

Instruction and practice in writing fiction and poetry. Students will submit a poetry portfolio and complete at least one short story.

CRW 2002 - Creative Writing II

3 Credit Hours
(Fall, Spring, Summer)

Advanced work in poetry and prose modes with emphasis on revision. Students will submit a poetry portfolio and write and revise at least one complete short story. Students will prepare creative work for publisher market.

CRW 2100 - Introduction to Fiction Writing

3 Credit Hours
(Offered as needed)

Practice in writing fiction using various points-of-view. Students will submit completed short stories for workshop. Upon agreement with the instructor, students may elect to develop novel chapters with synopsis. Students will prepare creative work for publisher market.

CRW 2201 - Introduction to Creative Nonfiction

3 Credit Hours
(Offered as needed)

This writing course examines the narrative possibilities of creative nonfiction. We will explore structure, technique, and authorial presence in representative works of established sub-genres, including literary journalism, travel and/or food writing, memoir, the lyric essay and collage.

CRW 2300 - Introduction to Poetry Writing

3 Credit Hours
(Offered as needed)

Practice in writing poetic forms employing poetic techniques. Students will workshop completed poems and submit a portfolio of revised poetry. Students will prepare creative work for publisher market.

CRW 2302 - Intermediate Poetry Writing

3 Credit Hours
(Offered as needed)

This course builds on poetry writing skills developed in CRW 2300. Students will examine styles and techniques of contemporary poets and develop a portfolio of original work with attention to the revision process. Students will

prepare creative work for publisher market.

Prerequisite(s): CRW 2300.

ENC 0056 - Developmental Writing Module

2 College Prep Credits
(Offered as Needed)

This course is designed to develop written language skills for students whose entry placement scores do not meet requirements for degree credit courses (not applicable for degree completion). Conducted in a lab setting, this course is self-paced course, designed to allow students to focus on their individual grammar, usage, and writing needs to prepare for successful entry into college credit English courses (not applicable for degree completion). This course may be taken in place of ENC 0027 if a student has a placement score of 98-102 on the PERT. Students may exit Developmental Writing Module by passing the coursework and by obtaining a passing score on the Departmental Exit Exam.

Prerequisite(s): Students must score 98-102 on the PERT or on an elective basis score 103 or higher on the PERT.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1101L - English Composition I Lab

1 Credit Hour
(Fall, Spring, Summer)

An instructor directed writing workshop designed to improve student's opportunity for success in ENC1101. Students will strengthen writing and grammar skills necessary to master the topics and concepts covered in ENC1101. Areas of focus include, but are not limited to, the following: expository and argumentative writing; appropriate diction;

conventions of Standard American English grammar, punctuation, sentence structure; conventions of MLA.

Prerequisite(s): ENC0025 and REA0017 or equivalent with a "C" or better grade, or a score of 100-116 on the PERT, or on an elective basis with a score of 103 or higher on the PERT.

Corequisite(s): ENC 1101

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

English as a Second Language (ESOL)

XEL 01___ - ESOL I

This course provides small group and individualized instruction in both oral and written English communication skills at the beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 02___ - ESOL II

This course provides small group and individualized instruction in both oral and written English communication skills at the low beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 03___ - ESOL III

This course provides small group and individualized instruction in both oral and written English communication skills at the high beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 04___ - ESOL IV

This course provides small group and individualized instruction in both oral and written English communication skills at the low intermediate level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 05___ - ESOL V

This course provides small group and individualized instruction in both oral and written English communication skills at the high intermediate level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 06___ - ESOL VI

This course provides small group and individualized instruction in both oral and written English communication skills at the advanced level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

Entrepreneurship

ENT 2931 - Selected Studies in Entrepreneurship

1 Credit Hour
(Spring)

In this course, topics of current interest are presented in group instruction.

Fire Science

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0077 - First Responder for Public Safety Personnel

45 Clock Hours
(Fall, Spring, Summer)

This course trains public safety members who are the first to arrive at an emergency in providing efficient and accurate pre-hospital care. Students assess patients for wounds to determine if trauma, shock, burns or closed airways are a problem and how to address those issues by dressing wounds, stabilizing the person or administering oxygen. They immobilize patients and address common emergency medical issues with basic treatments. This course includes hands-on, practical experience and is necessary to be eligible for first responder certification.

This course is a co-requisite course for students entering the Firefighting Certificate program who do not have certification for first responder, EMT, or paramedic.
*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 1140 - First Responder for Public Safety Personnel

3 Credit Hours
(Offered as needed)

This course introduces the student to the skills and techniques used for first response to medical emergencies. Classroom instruction includes a variety of medical related topics encountered by public safety personnel. Practical exercises and scenarios are included to enhance classroom instruction and skill development.

FFP 1301 - Fire Service Hydraulics

3 Credit Hours
(Offered as needed)

Introduction to the study and characteristics of hydrostatics and hydrodynamics in the fire service; to include basic hydraulic measuring units, facts, theories, and formulas for problem solving. The course covers the relationship between flow and pressure and mathematical hydraulic formulas.

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and

strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human

relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

FFP 2720 - Company Officer

3 Credit Hours
(Fall, Spring, Summer)

Designed to assist fire officers in solving the varied problems and situations they will be required to manage effectively in today's ever changing fire service. The curriculum includes a review of fire department organization and administration, management theory, leadership, communication, motivation, and small group dynamics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2780 - Fire Department Administration

3 Credit Hours
(Fall, Spring, Summer)

The course is designed to present the principles of management theory, and its application in the fire service. The course is intended for officers whose area of responsibility encompasses long and short range planning, budgeting and administration.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

FFP 2823 - Technical Applications in Emergency Management

3 Credit Hours
(Offered as needed)

This course explores issues and problems associated with the use of technology in emergency management. It examines strategies to overcome these issues and problems. Some of the subjects treated are use of the Internet, spatial analysis applications in vulnerability analysis, decision support systems, and emerging technologies.

FFP 2834 - Societal Issues in Disaster Management

3 Credit Hours
(Offered as needed)

This course examines human response to disaster events, including political and economic factors influencing vulnerability. It examines how individuals and institutions make decisions at all levels of disaster response, it is an introduction to current research pertaining to the sociological aspects of disaster, and it will provide increased awareness of the potential and difficulties in using social science research as a basis for modifying public policy.

FFP 2841 - Contingency Planning for the Private Sector

3 Credit Hours
(Offered as needed)

This course is designed to assist students in developing effective public sector plans by using the National Incident

Management System and the Incident Command System templates. The curriculum includes case studies and development procedures for private sector logistics management and employee support planning.

French

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

FRE 1121 - French II

4 Credit Hours
(Spring)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): FRE 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

General Education Diploma (GED)

XGE 14__ - GED 2014 Comprehensive

The GED 2014 Comprehensive Preparation Program provides skills and knowledge building for each of the four content-area assessments of the Official GED 2014 Tests: Reasoning through Language Arts, Mathematics Reasoning, Science, and Social Studies. The purpose of the program is to prepare students to obtain the knowledge and skills necessary to pass the Official GED Tests and be awarded a State of Florida High School Diploma. An additional performance level will certify that the adult student is career and college ready. This program strives to motivate students not only to obtain a GED diploma, but to continue their education to earn a postsecondary degree, certificate, or industry certification.

*Course number varies with number of instructional contact hours.

Geography

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

Geology

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

GLY 2601C - Introduction to Paleontology

4 Credit Hours
(Fall or Spring)

This course is a survey of prehistoric life. Topics include fossilization, systematics, evolution, ecology, extinction, and the geological history of life. Laboratory work covers the anatomy, classification, and ecology of major phyla of both extinct and extant organisms, including monerans, protists, plant, macroinvertebrates, and vertebrate animals. The course involves local and regional fossil collecting trips.

Graphic Design

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2141C - Multimedia II

4 Credit Hours
(Offered as needed)

An advanced course covering principles of design and information architecture surrounding interactive multimedia presentations. Students will learn an industry standard interactive DVD media authoring software application. Students will produce a finished interactive DVD.

Prerequisite(s): GRA 2140C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high

quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2900 - Independent Study – Graphic Art

1 Credit Hour
(Offered as needed)

This course covers the practical treatment of Graphics/Printing Technology. Emphasis is on individual work projects.

Prerequisite(s): GRA 1151C or PGY 1801C

GRA 2905 - Independent Study – Graphic Design

1 Credit Hour
(Offered as needed)

The student will initiate independent computer related work, utilizing various software and hardware. The course may be taken four times for credit.

Prerequisite(s): GRA 1151C or PGY 1801C

▲Technology-Across-the-Curriculum Course.

GRA 2941A - Internship, Graphic Design

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C and permission of the instructor.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Health Education

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1432 - Pathopharmacology

3 Credit Hours
(Fall)

Introduction to the nature, cause, and treatment of disease entities and the body's defense mechanisms. Commonly used drugs will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1442 - Pharmacology for HIM Professionals

2 Credit Hours
(Offered as needed)

Pharmacology for HIM Professionals provides an overview of the pronunciation, spelling, actions and side effects of the most commonly prescribed medications. The course will examine pharmacological terms, abbreviations, and symbols used by healthcare providers to write prescriptions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2253 - CPT Coding - Part 1

3 Credit Hours
(Spring)

Instruction and practice in basic CPT coding conventions, principles of classifying physician services using current procedural terminology (CPT-4), APC, and auditing procedures. Ethical standards of practice will be analyzed.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

(Previously listed as HIM1253)

HIM 2272 - Healthcare Reimbursement

3 Credit Hours
(Summer)

Emphasis on billing regulations for the State of Florida. Course content includes LMRPS, Workers' Compensation laws, Florida Medicare, and claims for automobile accident injuries.

Prerequisite(s): HIM 2253 and HIM 2724 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2291 - CPT Coding Part 2

3 Credit Hours
(Spring)

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, inpatient and outpatient prospective payment systems, encoding software and RBRVs.

Prerequisite(s): HIM 2253 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2724 - ICD Coding Part 1

3 Credit Hours
(Fall)

This course provides a foundation using ICD-10-CM/PCS coding conventions, rules, methodology and sequencing, data sets, documentation requirements, and coding resources.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

HIM 2729 - ICD Coding Part 2

3 Credit Hours
(Fall)

This course focuses on assigning appropriate ICD, DRG, and Level II (HCPCS) codes to a wide range of original source medical documents. This course increases the quality of code selection by applying the decision process in problem solving using well-defined medical record review methods and guidelines. Ethical practices will be discussed.

Prerequisite(s): HIM 2724 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2815C - Professional Practice Experience

3 Credit Hours
(Summer)

Working in a simulated, online environment, students will endeavor to code and bill using nationally recognized, American Health Information Management Association (AHIMA) simulation software.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

HIM 2931C - Special Topics in Health Information Technology

1 Credit Hour
(Summer)

This course is a review of skills and work processes to support classification and coding to become nationally certified in-field. Effective test-taking strategies for certification exams and employability skills will be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

HSA 3110 - Health Care Organization and Management

3 Credit Hours
(Spring)

This course focuses on the structure and management of health care organizations, and the fundamental issues facing the U.S. health care system. Key topics include health status, the organization of health services, manpower, public health, financing, facilities, utilization, quality, regulation, and national health policy.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3111 - Introduction to Health Care Management

3 Credit Hours
(Fall)

This course studies the administration, organization and delivery of health care in the United States. Topics to be examined include health care leadership, management, strategy, performance improvement, information technology, insurance, financial and human resources management, as well as ethical and legal concepts.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3113 - Contemporary Issues in Health Care

3 Credit Hours
(Spring)

This course is designed to introduce students to a range of issues related to health and health care in the United States. Course content will give students the opportunity to explore differing perspectives as they develop a deeper understanding of the issues and enhance their research and communication skills. The course will enable students to analyze and evaluate evidence regarding controversial issues. Students will develop and practice skills in formulating and writing well-informed, well-articulated arguments and reflections.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4191 - Health Information Systems

3 Credit Hours
(Fall)

This course focuses on the theories, concepts and principles of health information systems and development of critical thinking skills for use in practice/working in health care informatics. Current trends and issues in using, designing, and managing heath care information systems will be examined. Students, applying evidence-based knowledge, will analyze the design and implementation of health care information systems.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4922 - Capstone: Health Care Management

3 Credit Hours
(Spring)

This course integrates the information, skills, and abilities provided throughout the Health Administration Program in a capstone project. Students complete a project that demonstrates excellence by applying the knowledge gained from the core courses and materials studied throughout the program. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

Prerequisite(s): senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

History

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1012 - World Civilization I

3 Credit Hours ❖ ¶
(Fall)

A study of world history from 4000 BC to 1650 AD as it relates to the development of western civilization. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1022 - World Civilization II

3 Credit Hours ❖ ¶
(Spring)

A study of history from 1650 AD to the present as it relates to the development of the modern world. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

Hospitality Management

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems

approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2240L - Classical Cuisine

3 Credit Hours
(Fall)

Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures.

Prerequisite(s): FSS 1221L

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2600 - Hospitality Law

3 Credit Hours
(Offered as needed)

Nature and function of our legal system as it applies to the operation of an INN. Innkeeper-guest relationship, contracts, torts, civil rights and insurable risks are emphasized.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2941 - Hospitality Internship

2 Credit Hours
(Offered Fall, Spring, Summer)

This course consists of on-the-job experience supplied by the hotel-motel-resort- restaurant industries. Job placement will be dependent upon the availability of participating hospitality institutions. The course consists of 60 hours per semester of on-the-job instruction accompanied by a seminar class.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Humanities

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1905A - Independent Study – Arts and Humanities

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue nonscheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): approval from department chair, a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

HUM 2250 - Humanities – A Contemporary Perspective

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

This course is an integrated study of the artistic, cultural, philosophic, religious, social, and technological influences that shape modern western cultures in the modern era. The focus will begin with the 20th century and follow, chronologically, the issues of the modern era. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2700 - Humanities – Foreign Study

3 Credit Hours ❖ ¶
(Offered as needed)

A variable humanities content course designed to allow students first-hand learning experiences outside the United States. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2920 - Humanities Colloquium

1 Credit Hour
(Fall, Spring, Summer)

Humanities Colloquium is a lab designed to introduce students to critical visual and listening skills to become an intelligent arts consumer. Initial lecture sessions are devoted to discussions of the elements of analysis of art works, music pieces, theater performances, and dance presentations. Students will be required to attend selected NWFSC Visual and Performance Arts presentations and to write a short critical review of each. Topics may vary.

Prerequisite(s): placement test may be required.

HUM 2930 - Humanities – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

IDS 2220 - Issues in Science and Religion

3 Credit Hours
(Fall, Spring, Summer)

This course will explore and relate scientific and religious conceptions of the natural world. Survey of major scientific discoveries and theories that both challenge and inform religious belief (including Big Bang cosmology, geologic time, evolutionary biology and paleontology, and Earth systems/global change). Survey of the historic role of religion and religious cosmologies in the rise of science, types of religious experience, concepts of God and divine action, the idea of the sacred as the ground for meaning in nature, natural theology and theology of nature, intelligent design, varieties of creationism, and various metascientific proposals (Anthropic Principle, Gaia Hypothesis, Biophylia, Deep Ecology). Emphasis is placed on integrating and harmonizing scientific and religious understandings to develop a more meaningful and informative, contemporary worldview.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Legal Assisting

PLA 1003 - Introduction to Paralegal Studies

3 Credit Hours
(Fall)

This course is designed to give students a broad understanding of the nature of the paralegal profession and the elements contained within the profession, as well as its responsibility.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1114 - Legal Research and Writing

3 Credit Hours
(Spring)

This course is designed to provide the student with necessary skills and knowledge required in legal research/case analysis and legal writing.

Prerequisite(s): PLA 1003 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1600 - Wills, Trusts, and Probate

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of estate planning, wills, and probate administration.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2273 - Tort Law

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of tort law with objectives centered on personal injury torts.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2949 - Internship - Paralegal

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): completion of a minimum of 12 credit hours in the appropriate discipline, including PLA 1003 and permission of the instructor is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

*This college credit course is not intended for transfer and may not be applied toward the AA degree.

Library Science

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

Literature

AML 2010 - American Literature I

3 Credit Hours ¶
(Fall)

A course in American Literature from the pre-Colonial period to the Civil War. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2020 - American Literature II

3 Credit Hours ¶
(Spring)

A course in American Literature from Civil War to present. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: AML 2010 is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2100 - World Literature I

3 Credit Hours ❖ ¶
(Fall)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from antiquity through the Renaissance, that reflect cultural and intellectual heritage. May be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet the Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2120 - World Literature II

3 Credit Hours ❖ ¶
(Spring)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from the Renaissance to the present, that reflect cultural and intellectual heritage. May be used as a humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: LIT 2100 is not a prerequisite for this course)

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through

analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

Machining/CNC

ETI 2419C - Advanced Concepts of CNC Machines and CNC Machining Practices

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with advanced concepts in CNC machines and CNC machining to include: theory, operation, setup, safety, and practices.

Prerequisite(s): PMT 2261C or PMT 2262C

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Management

HUS 4950 - Capstone: Human Resources Management

3 Credit Hours
(Spring)

This capstone will build upon and integrate the primary human resource management skills introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge in the field of human resources.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as

management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3120 - Leadership and Group Dynamics

3 Credit Hours
(Spring)

An applied leadership course with a focus on case studies, projects and group interaction; includes theoretical background on group dynamics, small group behavior and motivation, power, types of groups, verbal and non-verbal communication skills and team-building. Emphasis will be placed on sociological and psychological dimensions of inter-group relations, including analysis and problem-solving through simulations, cases and similar activities which reflect a general business perspective, as well as leadership and group dynamics across a variety of business units/functions.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and MAN 3052, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3294 - Strategy and Innovation

3 Credit Hours
(Offered as needed)

This course explores the concepts and tools used by businesses to create and sustain competitive advantage under dynamic market conditions. Topics will include strategy formulation, understanding core capabilities, examining external competitive forces and evaluating goals. Emphasis will also be placed on understanding the process of innovation and challenges faced by innovative organizations.

Prerequisite(s): Upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3310 - Issues in Human Resource Management

3 Credit Hours
(Fall)

Introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. Approach will focus on current issues and applications.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3320 - Employee Staffing and Benefits

3 Credit Hours
(Fall)

An intermediate level course in employment staffing issues focusing on staffing patterns, organizational structures, job analysis and design, staffing efficiencies, employee assistance programs, staff projection models, and employee services.

Prerequisite(s): upper division standing and MAN 3310 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3350 - Training and Development

3 Credit Hours
(Fall)

Covers various staff training and development models, effective workshop techniques, designing and implementing company-wide training and development programs. Assessment of training needs, training and development as a benefit and setting development goals; students will design and conduct at least one workshop/training session for fellow students.

Prerequisite(s): upper division standing and GEB 3213 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3505 - Production Operations and Logistics Management

3 Credit Hours
(Spring)

This course examines the integration of production operations and logistics management and how this enables an organization to compete successfully in business. Special emphasis is placed on the relationships that exist between operations and the supply chain to include operations and supply chain strategies, business processes, project management, product design and development, and inventory management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3574 - Acquisition Management

3 Credit Hours
(Spring)

Students will be exposed to the fundamentals of government acquisitions. This course provides conceptual material on government acquisitions, to include program planning, execution, and control. Students will be introduced to the elements of program risk and learn risk management techniques. The systems engineering process will be emphasized to include work breakdown structures, cost -- benefit analysis, and scheduling.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure.

Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3610 - Global Logistics Management

3 Credit Hours
(Offered as Needed)

Examines selected industrial relations systems of Western Europe, Asia and the Americas, with special emphasis on differences among systems and the reasons such differences exist. The industrial relations significance of the multinational enterprise and management problems associated with operations in diverse systems are analyzed.

Prerequisite(s): Upper division standing and MAN 3593 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3786 - Sustainable Enterprise Planning

3 Credit Hours
(Offered as Needed)

This course introduces students to assessment tools, design and construction considerations, and operating planning requirements for sustainable enterprises. Students will learn about the ecological and economic benefits of sustainability/green practices. Additionally, they will learn how product, process, and service decisions affect sustainable enterprise concepts. Today's enterprises focus on social and environmental challenges, marketing, supply chain decisions, recycling, reusing, reconditioning, and other product and service decisions in order to realize a competitive advantage. This course will focus on best practices, case studies, evolving trends, and experimental efforts regarding sustainable/green systems.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3903 - Operations Research

3 Credit Hours
(Fall)

Operations Research is a science of modeling and optimization. It allows to model real-world problems by using mathematics, statistics and computers. It provides us the tools and theories to solve real-world problems by finding the optimal solutions to models subject to constraints of time, labor, resource, materials and business rules. With Operations Research, people make intelligent decisions to develop and manage their processes and businesses.

Prerequisite(s): Upper division standing is required. STA 2023, MAC 1140, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4162 - Customer Relations for Managers

3 Credit Hours
(Offered as needed)

This course focuses on relationship building for all customers of an organization. The impact of culture and diversity on business relationships, successful negotiation strategies, and promotion of the organization through media relations are discussed. Emphasis is placed on the manager's role in improving customer relationships by creating a customer-focused, organizational climate.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4401 - Labor Relations

3 Credit Hours
(Offered as needed)

This course explores the impact of employee organizations on labor relations, current problems, conflicts and trends and includes the development of managerial approaches to achieve labor management cooperation.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4520 - Quality Management

3 Credit Hours
(Spring)

This course examines the significance of quality as a primary competitive strategy for tomorrow's successful business organizations. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations functions. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, field trips and outside speakers. The students are expected to gain insight and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management. This course is appropriate for students who have an interest in: (1) managing the total quality program in a business organization, and/or (2) working for a business organization which already made a strong commitment to total quality management.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4555 - Quality Certification: ISO 9000

3 Credit Hours
(Fall)

A comprehensive study of internationally uniform quality standards (ISO 9000 and the steps to individual and organizational certification; includes management responsibility, quality system documentation, contract review, design control, process control, inspection and testing, corrective actions and other certification topics.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4570 - Purchasing and Materials Management

3 Credit Hours
(Fall)

The management of purchasing and the materials for production processes. Cost/price analysis, computer systems, forecasting, materials requirements, negotiations, and contracting are included.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4594 - Reverse Logistics

3 Credit Hours
(Offered as Needed)

In this course forward-moving logistics is compared to reverse-moving logistics. Both goods and information are discussed. Topics include federal and state regulations, waste management, recycled materials, technology, financial controls, stakeholders, and performance measurement.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4595 - Logistics Technology

3 Credit Hours
(Offered as Needed)

This course provides an overview of the use of technology (bar codes, gps, and radio frequency identification tags) in logistics to control recalls, returns, recycling, and waste management. Management functions, data synchronization, and interrelationships between different technologies to capture data regarding products moving in a logistics system are also discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4930 - Capstone: Acquisition Management

3 Credit Hours
(Spring)

In this seminar, students will have the opportunity to participate in hands-on projects applying the techniques in MAN

3574 - Acquisition Management. Emphasis will be on government acquisition management. Students will create a work-breakdown structure, a project schedule, and perform a cost-benefit analysis of alternatives. Earned value management will be introduced as a method of program control. Students will also identify potential risk areas and suggest mitigation plans.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4932 - Contract Negotiations Seminar

3 Credit Hours
(Offered as needed)

This seminar will refine the negotiation skills of the student through the use of readings, class discussions, case analyses, and practical exercises. Students will be introduced to goals, objectives, and strategies, as well as using appropriate tactics and methods to achieve them. The course will also help students understand the role of communication, power, and personality in the negotiation process and facilitate them assessing their personal abilities and traits as they relate to negotiation. While the course will focus on negotiation of defense-related contracts, the principles covered will apply to the entire range of interpersonal relationships.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4933 - Best-Value Source Selection Seminar

3 Credit Hours
(Offered as needed)

Focus is on the best-value source selection process. Students will walk through the acquisition cycle. Topics will include acquisition strategy, pre-solicitation activity, preparation for evaluation, initial proposal evaluation, discussions or negotiations, final proposal revision and recommendations and decisions.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4934 - Logistics Management Seminar

3 Credit Hours
(Offered as needed)

A special topics course conducted in group or individual format; focus is on the terms, concepts and processes associated with logistics and distribution in the contemporary business environment.

Prerequisite(s): upper division standing and MAN 3583 or MAN 3574. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4940 - Capstone: Supervision

3 Credit Hours
(Spring)

This capstone course will build upon and integrate the primary management skills and concepts introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge. This course will also cover basic entrepreneurial principles, which will be integrated throughout the student-led projects.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining core and emphasis business courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1346 - Supervision II

3 Credit Hours
(Offered as needed)

The course presents a continuing study of the functions of a personnel manager, philosophy of general management, employee socioeconomic climate and other information. Included are orientation, training, labor unions, safety, health and other related topics.

Prerequisite(s): MNA 1345 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2141 - Leadership Techniques

3 Credit Hours
(Offered as needed)

This interdisciplinary course addresses leadership in a group setting and focuses on leadership development through discussion, readings, group and individual projects and other applied activities.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Marketing

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Mathematics

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105L - College Algebra Lab

1 Credit Hour
(Fall, Spring, Summer)

A hands-on lab designed to improve students' success rates in the MAC 1105 - College Algebra course. Students will work on all topics covered in MAC 1105. Emphasis will be placed on strengthening algebraic skills through a variety of nontraditional approaches to learning, including small group collaboration and computer-based interactive learning. Meets specific general education requirements. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement scores

Corequisite(s): MAC 1105.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering,

mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

MAD 3107 - Applied Discrete Mathematics

3 Credit Hours
(Fall)

This course builds on the foundation established in Introduction to Discrete Mathematics with further exploration in logic, mathematical reasoning, and mathematical proof writing. Topics include logic, set theory, boolean algebra, combinatorics, and graph theory with applications.

Prerequisite(s): Completion of MAC 2312 with a grade of “C” or better or concurrent enrollment in MAC 2312.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAS 2103 - Linear Algebra

3 Credit Hours
(Offered as needed)

This is an introductory course in Linear Algebra intended to give students enough insight to enable successful pursuit of more abstract mathematics courses. This course includes the study of matrices and systems of equations, determinants, vector spaces, linear transformations, orthogonality, eigenvalues, and eigenvectors. Exercises using MATLAB will be required. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade or “C” or better, or equivalent.

MAT 0018 - Developmental Mathematics I

3 College Prep Credits
(Offered as needed)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit (not applicable for degree completion). It is designed to reinforce the knowledge of operations and applications of fractions, decimals, percents, and signed numbers. An introduction to algebra will also be covered. Students must pass this class with a "C" or better to move on to MAT 0028.

Prerequisite(s): A score of 50-95 on the PERT.

Corequisite(s): SLS 1101.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0022 - Developmental Mathematics Combined

6 Credit Hours
(Fall, Spring, Summer)

A course designed to satisfy the requirements of both MAT0018 and MAT0028 in one semester and prepare students for MAT1033A. Topics to be studied include computations with decimals, percents, integers, operations with rational and polynomial expressions, linear equations and inequalities in one variable, factoring, and basic linear graphing. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. Due to the nature of this course, calculators are not permitted. A grade of "C" or better is required for successful completion of this course. College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

Prerequisite(s): score of 50-95 on the PERT

Prereq/Corequisites: SLS 1101

MAT 0028 - Developmental Mathematics II

4 College Prep Credits
(Fall, Spring, Summer)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit (not applicable for degree completion). This course emphasizes concepts, techniques, and applications of the following topics: operations with real numbers, linear equations and inequalities in one variable, rational expressions, properties of exponents, polynomials, radical expressions, and graphs of lines.

Prerequisite(s): Grade of "C" or better in MAT 0018 or score of 96-113 on the PERT or on an elective basis a score of 114 or higher on the PERT

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0056 - Developmental Mathematics Module

2 College Prep Credits
(Fall, Spring, Summer)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit. This course emphasizes concepts, techniques, and applications of the following topics: operations with real numbers, linear equations and inequalities in one variable, rational expressions; properties of exponents, polynomials, radical expressions, and graphs of lines. Student may exit Developmental Mathematics Module by passing the coursework and by obtaining a passing score on the Exit Exam.

Prerequisite(s): score of 105-109 on the PERT or elective basis score 110 or higher on the PERT

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0157 - Modularized Developmental Mathematics II

4 College Prep Credits
(Fall, Spring)

This course is designed to help students develop computational & algebra skills needed for success in college level mathematics. This course uses a modular format in a lecture/lab setting. Students will take a diagnostic test in class to identify skills that have not been mastered and to determine placement into the appropriate modules. Each student will have an individualized learning plan such that he or she works only on skills not yet mastered. Possible topics in the learning plan include operations on signed numbers, solving linear equations and inequalities in one variable, graphing linear equations, operations with exponents and polynomial expressions, factoring polynomials and solving quadratic equations, introduction to rational expressions, and operations with square roots. Students will use computerized instruction as well as guided instruction by the instructor. Successful completion of this course requires mastery of the material in each module and a passing score of the department final exam. Course cannot be used toward AA or AS degree.

Prerequisite(s): MAT 0018 with a grade of "C" or better or a score of 96-113 on the PERT.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MAT 1033L - Intermediate Algebra Laboratory

1 Credit Hour
(Fall, Spring, Summer)

A hands-on lab designed to improve students' chance for success in the MAT1033A Intermediate Algebra course. Students will work to strengthen skills required to master the topics covered in Intermediate Algebra. The topics include, but are not limited to, factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions

Prerequisite(s): MAT 0028 or equivalent with a grade of "C" or better, or a score of 110-122 on the PERT, or on an elective basis with a score of 123 or higher on the PERT.

Corequisite(s): MAT 1033A

*Students scoring 110-113 on the PERT may enroll in MAT 1033A if they also enroll in MAT 1033L. Students should see an academic advisor.

MAT 2905 - Applied Teaching Techniques for Mathematics

4 Credit Hours
(Summer)

The goals of this course are: refinement or acquisition of mathematics skills and connections between mathematics topics needed for successfully tutoring in an academic setting; acquisition of general methods of tutoring as well as specific tutoring techniques needed for specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. Prerequisite: Consent of the department. A minimum grade of "C" is required.

Prerequisite(s): Admission to the BS Middle Grades Math degree program

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites.
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MHF 4404 - History of Mathematics

3 Credit Hours
(Offered as needed)

This course is for students pursuing an education degree with an emphasis in middle school and secondary mathematics. This course covers the evolution of mathematics from early number systems through modern mathematics. If used to meet NWFSC Teacher Education program requirements, this course requires a grade of "C" or better.

Prerequisite(s): Completion of MAC 2311 with a grade of "C" or better or concurrent enrollment in MAC 2311.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

Medical Office Skills

HSA 1100 - Introduction to Health Care

3 Credit Hours
(Fall)

This course provides an overview of the United States Healthcare System, including the economic, social, political, and technological forces that shape the industry. The role of state and federal government and regulatory agencies in healthcare delivery is examined. The fundamental roles and responsibilities of healthcare team members are surveyed. Healthcare safety, security, and infection control procedures will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation,

with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Meteorology

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

Military Science (ROTC)

MSL 1001 - Foundations of Officership

1 Credit Hour
(Fall)

This course examines the unique duties and responsibilities of officers, organization and role of the Army, reviews skills pertaining to fitness and communication, and analyzes Army values and expected ethical behavior. Requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 1002 - Basic Leadership

1 Credit Hour
(Spring)

This course presents fundamental leadership concepts and doctrine, the practice of basic skills that underlie effective problem solving, and examines the officer experience. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 2101 - Individual Leadership Studies

2 Credit Hours
(Fall)

This course develops knowledge of self-confidence and individual leadership skills. It develops problem solving and critical thinking skills, as well as how to apply communication, feedback, and conflict resolution skills. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour

physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 2102 - Leadership and Teamwork

2 Credit Hours
(Spring)

This course focuses on self-development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 3201 - Adaptive Team Leadership

3 Credit Hours
(Fall)

Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3202 - Leadership in Changing Environments

3 Credit Hours
(Spring)

Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, and apply principles and techniques of effective written and oral communication.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3203 - The Joint Environment

3 Credit Hours
(Offered as Needed)

Provides an introduction to the joint military environment. The course provides an overview of the development of national and regional policy through the national Security Council and national security system.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4301 - Developing Adaptive Leaders

3 Credit Hours
(Fall)

Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply

leadership and problem solving principles to a complex case study/simulation.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4302 - Leadership in a Complex World

3 Credit Hours
(Spring)

Capstone course to explore topics relevant to second lieutenants entering the army, describe legal aspects of decision making and leadership, analyze army organization from tactical to strategic level.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Music

MUH 2930 - Music Humanities – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUM 1620 - Audio and Acoustic Fundamentals

3 Credit Hours
(Fall, Spring, Summer)

Audio and Acoustic Fundamentals explores the basics of audio systems and equipment and the acoustical environment in which they are used. Emphasis is placed on equipment terminology, function and acoustical listening. The two basic fundamentals are summed together to begin laying the basic foundation required to operate audio and recording equipment.

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

MUN 1000 - Summer Ensemble Workshop

3 Credit Hours
(Summer)

An ensemble workshop open to any student who desires to improve vocal and physical presentation skills. A variety of musical physical styles will be studied and performed. Students participating in Summer Ensemble Workshop will be expected to participate in several scheduled performances.

Prerequisite(s): experience in high school or a desire to learn.

MUN 1001 - Summer Ensemble Workshop II

3 Credit Hours
(Summer)

An ensemble workshop and performance to improve vocal and physical presentation skills. A variety of musical physical styles will be studied and performed. Students participating in Summer Ensemble Workshop II will be expected to participate in several scheduled performances.

Prerequisite(s): MUN 1000.

MUN 1002 - Summer Ensemble Workshop III

3 Credit Hours
(Summer)

An ensemble workshop open to any student who desires to improve vocal and physical presentation skills. A variety of musical physical styles will be studied. Students participating in Summer Ensemble Workshop will be expected to participate in several scheduled performances.

Prerequisite(s): MUN 1000, MUN 1001.

MUN 1140C - Wind Ensemble I

1 Credit Hour
(Fall, Spring)

An instrumental ensemble providing an outlet and learning experience to study and perform standard wind band literature, to improve individual instrumental skills, and to sharpen ensemble techniques. The Wind Ensemble performs in both on and off campus venues.

Prerequisite(s): experience in high school or community band programs.

This course may be taken up to four times for credit.

MUN 1310 - Women's Ensemble

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student having experience in reading music. A variety of musical styles will be studied and performed. Students electing NWFSC Chorus will be expected to participate in scheduled

performances.

Prerequisite(s): Experience in high school choruses or choirs.

This course may be taken up to four times for credit.

MUN 1340A - NWFSC Show Choir I

1 Credit Hour
(Fall, Spring)

A study of the fundamental techniques and principles of integrating dance, voice, music and acting into a performance show choir. Training in voice, jazz movement, character interpretation and personality presentation is covered. Membership is open to all part-time or full-time students on a credit or audit basis. All music majors and performance majors must participate. The show choir appears in public performances at frequent intervals throughout the year.

Prerequisite(s): Audition, consent of department, music or performance minor.

This course may be taken up to four times for credit.

MUN 1360 - Madrigal Singers I

1 Credit Hour
(Offered Fall, Spring)

Auditioned a cappella ensemble teaching choral styles that range from the Renaissance madrigal to present day, such as vocal jazz, spirituals and contemporary choral works. This course if for the "first year" student.

Prerequisite(s): Audition based on vocal quality, musicianship and sight reading ability.

This course may be taken up to four times for credit.

MUN 1390 - Symphony Chorale I

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student. The Symphonic Chorus will study and perform literature for the large sized chorus.

Prerequisite(s): audition or permission of instructor.

This course may be taken up to four times for credit.

MUN 1421 - Flute Ensemble

1 Credit Hour
(Fall, Spring)

The study and performance of flute ensemble and flute choir music in a musical group.

Prerequisite(s): audition or instructor recommendation only.

This course may be taken up to four times for credit.

MUN 1710A - Rock and Jazz Ensembles I

1 Credit Hour
(Fall, Spring)

Music performing organization open to any student who wants to develop his or her performance repertoire. Laboratory studies include techniques of performing music, literature, practices, styles and media applicable to designated organized ensemble.

Prerequisite(s): Some experience in high school bands, etc.

This course may be taken up to four times for credit.

MUN 1720A - Rock and Jazz Ensembles II

1 Credit Hour
(Fall, Spring)

Music performing organization open to any student who wants to develop his/her performance repertoire. Laboratory studies include techniques of performing music, literature, practices, styles and media applicable to designated organized ensemble.

Prerequisite(s): experience in high school bands.

This course may be taken up to four times for credit.

MUN 2141C - Wind Ensemble II

1 Credit Hour
(Fall, Spring)

An instrumental ensemble providing an outlet and learning experience to study and perform standard wind band literature, to improve individual instrumental skills, and to sharpen ensemble techniques. The Wind Ensemble performs in both on and off campus venues.

Prerequisite(s): experience in high school or community band programs.

This course may be taken up to four times for credit.

MUN 2311 - Women's Ensemble II

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student having experience in reading music. A variety of musical styles will be studied and performed. Students electing Women's Ensemble will be expected to participate in scheduled performances.

Prerequisite(s): MUN 1310

This course may be taken up to four times for credit.

MUN 2361 - Madrigal Singers II

1 Credit Hour
(Fall, Spring)

Auditioned a cappella ensemble teaching choral styles that range from the Renaissance madrigal to present day, such as vocal jazz, spirituals and contemporary choral works. This course is for the "second year" student.

Prerequisite(s): MUN 1360.

This course may be taken up to four times for credit.

MUN 2371 - NWFSC Show Choir II

1 Credit Hour
(Fall, Spring)

A study of the fundamental techniques and principles of integrating dance, voice, music and acting into a performance show choir. Training in voice, jazz movement, character interpretation and personality presentation is covered. Membership is open to all part-time or full-time students on a credit or audit basis. All music majors and performance majors must participate. The show choir appears in public performances at frequent intervals throughout the year.

Prerequisite(s): MUN 1340A.

This course may be taken up to four times for credit.

MUN 2392 - Symphony Chorale II

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student. The Symphony Chorus will study and perform literature for the large sized chorus.

Prerequisite(s): MUN 1390.

This course may be taken up to four times for credit.

MUS 1905A - Independent Study – Music

1 Credit Hour
(Offered as needed)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval required. Placement test is required. The course includes Writing-Across-

The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of “C” is also required.

Prerequisite(s): Approval from department chair, a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

MUS 2930 - Music – Special Topics

3 Credit Hours
(Fall, Spring)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

*This course may be taken up to four times for credit.

MUT 1001 - Fundamentals of Music

3 Credit Hours
(Fall, Spring, Summer)

A pre-theory course for the music major, non-music major, or for the elementary education major.

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7^{th} chords, augmented 6^{th} chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

MVB 1201 - Applied Music Secondary – Brass I

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For nonmusic majors and music majors.

This course may be taken up to four times for credit.

MVB 2202 - Applied Music Secondary – Brass II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For nonmusic majors and music majors.

Prerequisite(s): MVB 1201.

This course may be taken up to four times for credit.

MVK 1211 - Applied Music – Piano I

1 Credit Hour
(Fall, Spring)

Private instruction in piano, as secondary instrument, consisting of one half-hour lesson per week. Minimum of one hour daily practice is required.

This course may be taken up to four times for credit.

MVK 1311 - Applied Music - Piano I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in Piano in the freshman year of study as the student's principal performing medium. This one hour, weekly lesson is for intended piano majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which three-four memorized selections from standard literature will be required.

Prerequisite(s): MVK 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVK 2221 - Applied Music – Piano II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in piano, as a secondary instrument, consisting of one half-hour lesson per week. Minimum of one hour daily practice is required.

Prerequisite(s): MVK 1211.

This course may be taken up to four times for credit.

MVK 2321 - Applied Music - Piano II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in Piano in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended piano majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which a memorized sonata movement and three-four memorized selections from standard literature will be required.

Prerequisite(s): MVK 1211, MVK 1311 and Division Chair approval.

This course may be taken up to four times for credit.

MVP 1201 - Applied Music Secondary – Percussion I

1 Credit Hour
(Fall, Spring)

Private instruction in percussion instruments to develop the student's performance ability in an applied area. One half-hour private lesson per week. Minimum of one hour daily practice is required.

This course may be taken up to four times for credit.

MVP 2202 - Applied Music Secondary – Percussion II

1 Credit Hour
(Fall, Spring)

Private instruction in percussion instruments to develop the student's performance ability in an applied area. One half-hour private lesson per week. Minimum of one hour daily practice.

Prerequisite(s): MVP 1201.

This course may be taken up to four times for credit.

MVS 1016 - Applied Strings – Guitar I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction on guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

This course may be taken up to four times for credit.

MVS 1017 - Applied Strings – Bass Guitar I

1 Credit Hour
(Fall, Spring)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

This course may be taken up to four times for credit.

MVS 1201 - Applied Music Secondary – Strings I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

This course may be taken up to four times for credit.

MVS 2026 - Applied Strings – Guitar II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

Prerequisite(s): MVS 1016.

This course may be taken up to four times for credit.

MVS 2027 - Applied Strings – Bass Guitar II

1 Credit Hour
(Fall, Spring)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

Prerequisite(s): MVS 1017.

This course may be taken up to four times for credit.

MVS 2202 - Applied Music Secondary – Strings II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

Prerequisite(s): MVS 1201.

This course may be taken up to four times for credit.

MVV 1211 - Applied Music – Voice I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour session per week, with a minimum of one hour daily practice.

This course may be taken up to four times for credit.

MVV 1311 - Applied Music - Voice I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in voice in the freshman year of study as the student's principal performing medium. This one hour weekly lesson is for intended voice majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which four memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVV 2221 - Applied Music – Voice II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour lesson per week, with a minimum of one hour daily practice.

Prerequisite(s): MVV 1211.

This course may be taken up to four times for credit.

MVV 2322 - Applied Music - Voice II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in voice in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended voice majors, and requires Division Chair Approval. A major component of this class is a required juried performance at the end of the semester for which six memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211, MVV 1311 and Division Chair approval.

This course may be taken up to four times for credit.

MVW 1201 - Applied Music Secondary – Woodwinds I

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

This course may be taken up to four times for credit.

MVW 2202 - Applied Music Secondary – Woodwinds II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

Prerequisite(s): MVW 1201.

This course may be taken up to four times for credit.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

Nursing

NSP 2049L - Nursing Practice Readiness

1 Credit Hour
(Fall, Spring)

This elective laboratory course assists the nursing student to prepare for the RN licensure examination (NCLEX-RN). Web-based instructional methodologies allow the student to complete the course within a self-paced time frame. Students practice test taking skills, self-evaluation and other strategies to gain confidence in sitting for the NCLEX-RN.

Prerequisite(s): NUR 2241C or permission from Nursing Program Director.

Special Nursing Program policies may apply to this course.

NSP 3640 - Nursing Care of Military and Veteran Populations

3 Credit Hours
(Spring)

This course is designed to identify the unique healthcare needs of military and veteran populations in the United States in order to prepare students and practicing nurses to develop competence in designing nursing interventions within civilian and government agencies in which military members and veterans seek healthcare. In accordance with the ANA's pledge (2012) to raise awareness of the unique conditions and needs of military veterans and their families, this course supports the Joining Forces initiative to further nursing training to include specialized topics such as traumatic brain injury, posttraumatic stress disorder, trauma rehabilitation, and understanding the military and veteran's healthcare delivery system.

NSP 4275 - Introduction to Critical Care Nursing

3 Credit Hours
(Offered as Needed)

This course examines the needs of the critically ill client. As part of the human experience, the integrity of the individual and family may be disrupted by a critical illness. During such time, the critical care nurse assists the individual and family to restore life processes to a state of dynamic equilibrium. This course emphasizes the involvement through use of scientific rationale and application of the nursing process in providing care to the individual client and family. Critical care concepts and skills for promoting client and family well-being are stressed.

NSP 4625C - Transcultural Nursing Immersion Course

3 Credit Hours
(Offered as needed)

This course unfolds in two phases: a comprehensive Orientation and Education Phase (I) and a Population Service Phase (II). The two stages are designed to be synergistic in nature. Phase I helps students to develop a deeper appreciation for an underserved region of the world. Phase I will set the stage for the immersion and learning that will take place during Phase II when students will provide basic healthcare and health education to an instructor chosen underserved population in the world. Air and ground travel are required. Current/valid Florida Registered Nursing License, good health, and a clear Background Check/Drug Screen are required. An International Passport may be required. Expenses associated with the course are the responsibility of the student.

Prerequisite(s): Student must be a Registered Nurse and have a clear background check/drug screen.

NSP 4869 - The Professional Nurse Manager and Leader

3 Credit Hours
(Offered as needed)

This course outlines the roles and functions of nurses in executive practice using the competencies identified by the American Organization of Nurse Executives (AONE). Successful nurse leaders and managers exercise complex leadership responsibilities that directly affect the quality of patient and family care in today's multifaceted healthcare management systems. This course will address competencies in communication, knowledge of the healthcare environment, business skills and principles, and professionalism. The course content also provides a review of the material covered in the Certified Nurse Manager and Leader examination conducted by the American Organization of Nurse Executives Credentialing Center that is available to BSN prepared Registered Nurses.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 1021C - Nursing Process I

6 Credit Hours
(Fall, Spring)

This course introduces concepts and principles of holistic nursing care. Students will build on knowledge obtained in the biophysical and psycho-social sciences in this first of four required clinical nursing courses in the nursing curriculum. Theory content includes an introduction to healthcare systems ethical-legal aspects of nursing practice, health and illness, communications, functional health patterns of clients, stress-adaptation, professional behaviors, and all steps of the nursing process with emphasis on assessment of older adult clients. Students begin socialization into the role of the Associate Degree Nurse as a member of an interdisciplinary healthcare team.

Prerequisite(s): Admission to the AS Nursing Program, BSC 1085C, ENC 1101, (MAC 1105 OR STA 2023)

Corequisite(s): NUR 1021L

Prereq/Corequisites: BSC 1086C, HUN 2201

Special Nursing Program policies may apply to this course.

NUR 1021L - Nursing Process I Clinical Experience

4 Credit Hours
(Fall, Spring)

This course introduces students to the role of the Associate Degree Nurse in providing direct, holistic nursing care to young, middle-aged and older adults who are hospitalized or in community settings. Students are introduced to all steps of the nursing process with a focus on assessment skills. Students will identify self-learning needs and set their own goals for improvement. Critical thinking and working effectively with peers and other healthcare professionals as a team member is expected. The demonstration of caring behaviors and therapeutic communication as a provider of bedside, technical nursing care is emphasized. Students must demonstrate safe performance of basic nursing skills, including but not limited to medication administration, physical assessment, and comfort care.

Prerequisite(s): Admission to the AS Nursing Program

Corequisite(s): NUR 1021C.

Special Nursing Program policies may apply to this course.

NUR 1141 - Pharmacologic Principles in Nursing I

1 Credit Hour
(Fall, Spring)

This course introduces students to concepts and principles of pharmacology related to safe administration of therapeutic agents within the nursing process framework. Students begin to learn major drug classifications and selected exemplars along with principles of safe, effective administration of drugs. Students will learn dosage calculations, factors that affect the absorption, excretion, distribution, and metabolism of drugs, as well as drug actions, adverse effects, and interactions.

Prerequisite(s): Admission to the AS Nursing Program

Special Nursing Program policies may apply to this course.

NUR 1142 - Pharmacologic Principles in Nursing II

1 Credit Hour
(Fall, Spring)

An introduction to the role of the associate degree nurse in providing direct, holistic nursing care to young, middle-aged and elderly adults who are hospitalized or receiving care in community settings. Emphasis is on applying all steps of the nursing process with focus on assessment skills. Pre-requisite college foundation and nursing courses provide theoretical bases for nursing care. Critical thinking is an expected behavior along with skills in working ethically and effectively with peers and other health care professionals as a team member; demonstrate caring behaviors and therapeutic communication with clients as a provider of bedside, technical nursing care. The student is expected to demonstrate safe performance of basic nursing skills, e.g., medication administration, physical assessment and comfort care of hospitalized adults and nursing home residents.

Prerequisite(s): NUR 1141 or LPN licensure and admission to the Nursing Program

Corequisite(s): NUR 1231C and NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 1231C - Nursing Process II

5 Credit Hours
(Fall, Spring)

Application of the nursing process continues with emphasis on the planning and implementation of nursing care for clients experiencing threats to functional health patterns. Development of professional behaviors, such as developing therapeutic relationships continues with students working clients through life interactions. Students further develop critical thinking skills through case studies and simulation scenarios designed to provide students with problem solving skills in analyzing, planning and prioritizing care for clients whose health problems are more acute or chronic; the client with psycho-emotional dysfunctions, dysfunctional support systems situations, grief, and loss. Students learn basic management skills as a team member caring for a limited number of clients in hospitals with emphasis on coordination of nursing care and discharge planning. Conflict management skills are highlighted as the student increases role as client advocate.

Prerequisite(s): NUR 1021L NUR 1021C and NUR 1141;or LPN licensure; admission to the AS Nursing Program or permission from the program director

Corequisite(s): NUR 1750L and NUR 1142

Prereq/Corequisites: DEP 2004

Special Nursing Program policies may apply to this course.

NUR 1750L - Nursing Process II - Clinical Experience

4 Credit Hours
(Fall, Spring)

This course builds on competencies presented in Nursing Process I regarding the role of the Associate Degree Nurse in providing direct, holistic nursing care for adult clients experiencing dysfunctional health patterns. Clinical experiences in hospitals, clinics, and community settings provide students with opportunities to apply the nursing process in care of clients, including the older adult. Students continue to develop management skills through conflict management and other professional behaviors. Students demonstrate safe performance of all basic and more complex nursing skills.

Prerequisite(s): NUR 1021L or LPN licensure

Corequisite(s): NUR 1231C.

Special Nursing Program policies may apply to this course.

NUR 1940L - Nursing Clinical Externship

3 Credit Hours
(Summer)

This elective course is designed to offer students the opportunity to gain additional clinical skills practice during the summer semester. Working with a preceptor and the nursing faculty in area hospitals, clinics, or community settings , the student will be able to perform all skills learned in successfully completed nursing courses.

Prerequisite(s): admission to the AS Nursing Program; NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 2233C - Nursing Process III

6 Credit Hours
(Fall, Spring)

Students continue to use the nursing process and critical thinking with emphasis on primary and secondary prevention as nursing interventions in clients experiencing threats to functional health patterns, including during the childbearing process and children whose normal lines of defense have been invaded by stressors to the degree that hospitalization is necessary. Nursing practice issues continue to focus on ethical-legal issues related to acute and/or chronic illness and disability. Management skills include delegation and career development.

Prerequisite(s): NUR 1231C & NUR 1142 or approval from the program director.

Corequisite(s): NUR 2233L

Prereq/Corequisites: MCB 2010C

Special Nursing Program policies may apply to this course.

NUR 2233L - Nursing Process III – Clinical Experience

4 Credit Hours
(Fall, Spring)

Students continue to apply knowledge and skills learned in previous nursing courses in providing nursing care for the hospitalized child, the family during the maternity cycle, and adults whose health problems are more complex and/or chronic. Clinical sites include hospitals, health departments, clinics, physician offices, schools and other community settings. Conflict resolution skills are applied, as needed, to meet client and/or peer learning goals. Delegation skills with peers are also practiced. Students demonstrate continuation of all previously learned nursing skills and must perform safely all advanced nursing skills in this clinical course.

Prerequisite(s): NUR 1750L

Corequisite(s): NUR 2233C.

Special Nursing Program policies may apply to this course.

NUR 2241C - Nursing Process IV

5 Credit Hours
(Fall, Spring)

Students integrate knowledge and principles of the biophysical and psychosocial sciences to solve life-threatening problems that affect a limited number of critically ill clients in a variety of clinical settings. Students differentiate holistic nursing care therapies in primary, secondary and tertiary care settings. Students become proficient in applying all steps in the nursing process with emphasis on evaluating nursing care outcomes. Students apply critical thinking skills in exploring case-based practice situations and work together in simulation seminars to select effective client care improvement processes. Self-evaluation is part of the socialization process to prepare students for the work world as competent, caring staff nurses. Nursing practice issues include licensure standards and continued professional development.

Prerequisite(s): Permission from the Director of Nursing or NUR 2233C; MAC 1105 or STA 2023

Corequisite(s): NUR 2241L, NUR 2811L

Prereq/Corequisites: SYG 2000

Special Nursing program policies may apply to this course.

NUR 2241L - Nursing Process IV – Clinical Experience

3 Credit Hours
(Fall, Spring)

Students apply knowledge and principles of the biophysical and psychosocial sciences to assess, plan, implement and evaluate holistic nursing care of critically ill adults in hospitals, ambulatory care settings, and the home. Students will expand on management of care skills in preparation for their four-week clinical practicum prior to graduation from the program. Students will also shadow a home health/hospice nurse in observing treatment and palliative care of adults and children. Other clinical activities will include experiences in the emergency department and critical care units. Students must demonstrate competency in all behaviors required for an Associate Degree Nursing graduate.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2811L

Special Nursing Program policies may apply to this course.

NUR 2811L - Nursing Practicum

3 Credit Hours
(Fall, Spring)

This course is a capstone course and provides a time during the last four weeks of the nursing program in which students begin to transition from the student role into the graduate role as an associate degree nurse. Students attend seminar hours and complete standardized testing for evaluation in proficiency in applying all steps in the nursing process with emphasis on evaluating safe nursing care outcomes. Students complete clinical practice hours with an experienced registered nurse preceptor to provide holistic nursing care for a limited number of clients. The focus is on demonstration of all professional behaviors and competencies expected of the associate degree registered nurse graduate at entry level. Clinical experiences provide hands-on learning opportunities, enhancing clinical thinking, safe nursing judgment, and clinical confidence in skills. Clinical experiences take place in a variety of clinical settings and work schedules.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2241L

Special Nursing Program policies may apply to this course.

NUR 2931 - Special Topics in Associate Degree Nursing

1 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2932 - Special Topics in Associate Degree Nursing

2 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2933 - Special Topics in Associate Degree Nursing

3 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2934 - Special Topics in Associate Degree Nursing

4 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2935 - Special Topics in Associate Degree Nursing

5 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 3067C - Health Assessment

3 Credit Hours
(Fall, Summer)

This course is designed to develop the student's knowledge for obtaining and recording a systematic, comprehensive health history, psychosocial assessment, and physical examination of the adult. The course involves the synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as they apply to the findings obtained in the comprehensive health assessment of clients of various ages. During the fieldwork experience, emphasis will be placed on collection of a database through physical assessment, history taking and interviewing.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3071 - Writing for Success in Nursing

1 Credit Hour
(Fall, Spring, Summer)

This course Is designed to develop the student's knowledge for writing at the upper division nursing level. The course includes information regarding use of APA format and scholarly writing resources.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 3080 - Dimensions of Baccalaureate Nursing Practice

3 Credit Hours
(Fall, Summer)

This course will provide Registered Nurses, who are returning to school to earn a Baccalaureate degree, an opportunity to advance professional practice concepts. As designed, the course engages the student intellectually in an ongoing professional dialogue and journey with peers, colleagues, and instructors that serves to broaden the student's professional development and builds on preexisting knowledge and experiences. The course curriculum is written for adult learners with the characteristics of self-direction, prior experience, applicability to practice, and motivation to meet the challenge to expand their knowledge base and to utilize advanced critical thinking skills.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3678 - Nursing Care of Vulnerable Populations

3 Credit Hours
(Offered as needed)

Caring for the vulnerable members of society is a function nurses perform without regard for their own ambitions, personal safety, and financial security. This course is designed to pull together material from different cultures and at risk groups of individuals considered vulnerable populations. Key concepts will be discussed that will provide a basic structure for caring for the vulnerable, the relevance of nursing theories to vulnerable populations, nursing research showing the kinds of phenomena nurses study, and many ideas about learning to work with and advocate for vulnerable individuals.

NUR 3767 - Nursing Care of Complex Clients

3 Credit Hours
(Spring)

This course assists the RN to BSN student in the assimilation of pathophysiology, assessment, and pharmacological nursing concepts with variety complex client issues. This course provides expanded concepts related to nursing care for individuals experiencing complex alterations in health problems as they progress through a variety of healthcare delivery systems and environments.

Prerequisite(s): NUR 3067C, NUR 3080.

NUR 3826 - Nursing Ethics

3 Credit Hours
(Offered as needed)

This course provides an in-depth exploration of ethical principles and moral reasoning as the foundation of nursing practice. The ANA Code of Ethics will be used as a framework for examining current issues in healthcare delivery across the age span from reproductive issues to end-of-life care.

Prerequisite(s): Must be an RN or ASN student.

NUR 3837 - Health Care Issues

2 Credit Hours
(Fall, Spring)

This course provides a forum for the exploration and evaluation of concerns germane to contemporary nursing. The focus of this course is on the nursing profession and current major issues and problems that concern it. Social forces influencing changes in the nursing profession are analyzed in terms of historical antecedents and their current manifestations. Recently passed, and pending legislature at both the national and state levels is emphasized.

Prerequisite(s): Current RN Licensure.

NUR 3955 - Portfolio I

1 Credit Hour
(Fall, Summer)

This course will provide RN to BSN students an opportunity to develop an electronic professional portfolio to express one's professional nursing expertise and proficiency.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 4125 - Clinical Pathophysiology

3 Credit Hours
(Fall, Spring)

This course examines in detail the underlying process involved in the development, evolution, manifestations, and complications of common clinical diseases across the life span, and compares normal and abnormal states. The biological bases for therapeutic clinical actions are examined.

Prerequisite(s): NUR 3067C

NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research

3 Credit Hours
(Fall, Spring)

This course is designed to provide the RN to BSN student with an introduction to the research process and evidence based practice. The purpose of the course is to stimulate interest in nursing research; to enable students to understand and judge the usefulness of scientific findings; and to develop an understanding of how clinical proficiency is combined with experimental proof to produce nursing practices based upon evidence. An on-line teaching method is used with optional workshops available to students.

Prerequisite(s): STA 2023.

NUR 4615C - Family and Community Health

5 Credit Hours
(Fall, Spring)

The Family and Community Health Nursing course is designed to facilitate the conceptualizing of family, population groups, and community as units of care from diverse cultures, ethnic, and social backgrounds. The student is provided a fieldwork opportunity to assess the health needs of selected families and groups in the community setting with selected health promotion, risk reduction, and disease prevention. The nursing process is used to examine multiple influences impacting life-course experiences of families and communities to enhance functioning.

Prerequisite(s): NUR 3067C, NUR 3080, admission to the BSN program and completion of all General Education requirements.

NUR 4827C - Nursing Leadership and Management

5 Credit Hours
(Spring, Summer)

This course provides students with an evidence-based study of leadership, collaboration, and coordination in healthcare settings. Students develop an evidence based paper to deal with key leadership and management issues related to professional goals. Nursing leadership and management fieldwork focuses on the roles and functions of the professional nurse in these roles. Issues associated with healthcare delivery are explored. Fieldwork provides an opportunity to plan, implement and evaluate a change in the practice of nursing.

Prerequisite(s): NUR 3080,NUR 4165, NUR 3067C, NUR 4615C.

NUR 4956 - Portfolio II

1 Credit Hour
(Spring, Summer)

This course will provide students an opportunity to complete and evaluate their electronic professional portfolio to express their professional nursing expertise and proficiency.

Prerequisite(s): NUR 3955, NUR 3080; Pre or Corequisite: NUR 4827C.

SPN 3036 - Spanish for Health Care Providers

3 Credit Hours
(Offered as needed)

Spanish for Health Care Providers is designed for individuals majoring in nursing or working in health-related areas. The course focuses on vocabulary needed for the healthcare workplace, with grammar taught as a task-based practical skill. Students will learn phrases used to complete health assessments which include conducting interviews, filling out forms, writing reports, and reading and understanding medical articles and brochures. Prevalent disease processes will be discussed as well as cultural practices that affect health care, specifically the health care of Spanish-speaking patients. This course does not fulfill any part of the Florida state language requirements.

Nutrition

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

Oceanography

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

OCE 1013C - Aquatic Environmental Science

4 Credit Hours
(Offered as needed)

This course will investigate living and non-living components of aquatic ecosystems. Students will learn how aquatic ecosystems function naturally as well as how human activity can alter these ecosystems. The course is built around field trip(s) and lab work during which students will obtain water quality data from a local aquatic environment. Through field trip(s) and lab work, students will gain appreciation for the local relevance of course material. For both majors and non-majors, a key outcome of such experiences will be gaining experience in using inquiry and reasoning through the scientific method and becoming comfortable with data, technology, and instrumentation. Problem-solving, interpretation of data, and class discussions will be key.

Paramedics

EMS 0119 - Emergency Medical Technician for Firefighters

140 Clock Hours
(Fall, Spring, Summer)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director

Corequisite(s): FFP 0010, FFP 0020, EMS 0119L

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 0119L - Emergency Medical Technician Lab for Firefighters

160 Clock Hours
(Fall, Spring, Summer)

This course provides an integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director.

Corequisite(s): FFP 0010, FFP 0020, EMS 0119

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1335 - Emergency Vehicle Operators Course

1 Credit Hour
(Offered as needed)

Students receive basic education and information on the safe and effective operation of emergency vehicles.

Prerequisite(s): permission of the EMS Program Director.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college

instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

EMS 2940 - Internship: Emergency Medical Services

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing

skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

Philosophy

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of

"C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2930 - Philosophy – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

Photography

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 1401C - Basic Photography

3 Credit Hours
(Fall, Spring)

A beginning course in black and white photographic and darkroom technique. Students will learn the functions of their camera and darkroom equipment. Students will apply their technical knowledge to various artistic challenges. Access to a 35mm camera with manual mode required.

PGY 1405C - Advanced Black and White Photography

3 Credit Hours
(Fall, Spring)

An advanced course in black and white photography. Students will be presented with more demanding creative challenges and will be exposed to a variety of advanced procedures in the darkroom. Access to a 35mm camera with manual mode required.

Prerequisite(s): PGY 1401C or equivalent.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

PGY 2221C - Commercial Photography II

4 Credit Hours
(Offered as needed)

As advanced a course that allows the student to expand their skill set in producing photographic illustrations for industrial and advertising use. Students may explore product, portrait, and on-location commercial photographic projects.

Prerequisite(s): PGY 1220C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2804C - Digital Photography III

4 Credit Hours
(Offered as needed)

An advanced-level photography courses where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 2802C.

▲Technology-Across-the-Curriculum Course.

Physical Education

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

PEL 1212A - Advanced Softball

1 Credit Hour
(Offered as needed)

Instruction, practice, and participation in advanced softball. The continuous development of physical skills is of major importance in this course.

PEL 1213 - Advanced Softball II

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Softball, which consists of instruction, practice, and participation in advanced softball. The continuous development of physical skills is of major importance in this course.

Prerequisite(s): PEL 1212A (Athletes)

PEL 1217A - Advanced Baseball

1 Credit Hour
(Offered as needed)

Instruction, practice, and participation in advanced baseball. The continuous development of physical skills is of major importance in this course.

PEL 1219 - Advanced Baseball II

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Baseball, which consists of instruction, practice, and participation in advanced baseball. The continuous development of physical skills is of major importance in this course.

Prerequisite(s): PEL 1217A (Athletes)

PEL 1624M - Advanced Basketball (Men)

1 Credit Hour
(Offered as needed)

This course is a high intensity, drill-oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that

students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

PEL 1624W - Advanced Basketball (Women)

1 Credit Hour
(Offered as needed)

This course is a high intensity, drill oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including: rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

PEL 1626M - Advanced Basketball II (Men)

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Basketball for Men, which consists of a high intensity, drill -oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

Prerequisite(s): PEL 1624M (Athletes)

PEL 1626W - Advanced Basketball II (Women)

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Basketball for Women, which consists of a high intensity, drill -oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

Prerequisite(s): PEL 1624W (Athletes)

PEM 1131A - Strength Training

3 Credit Hours
(Offered as needed)

This course is a high intensity lecture/demonstration and flexible lab hour weight training program designed to increase the size, strength, and endurance of the skeletal muscle system. Instruction includes, but is not limited to,

weight training safety, etiquette, history, and nutrition. Instruction will be given in the design of progressive resistance programs to increase total body efficiency and to meet the objectives of the individual student. Students are responsible for determining fitness for training, and those with medical problems which restrict personal activities are encouraged to obtain medical clearance before enrolling in the course.

PEM 2108 - Fitness Lab

1 Credit Hour
(Offered as needed)

Instruction and participation in an exercise program with emphasis on muscle endurance, strength and flexibility.

Prerequisite(s): HLP 1081 or approved wellness assessment by the department chair.

This course may be taken up to four times for credit.

PET 1000 - Introduction to Physical Education

3 Credit Hours
(Offered as needed)

A study of the history of physical education and sport with particular emphasis placed on present practices and trends.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

Physical Science

AST 1005 - Introduction to Astrobiology

3 Credit Hours
(Spring)

This course will explore the scientific evidence for the possibility, probability, and potential nature of life that might exist beyond the Earth. Contemporary discoveries about current and past conditions suitable for the origin of life on Mars and some of the moons orbiting other planets in our own solar system are reviewed in the context of what we understand about life on Earth. The question of life in other solar systems is also covered. Space travel and problems regarding intelligent extra-terrestrial beings visiting the Earth and intelligent life beyond the Earth but still within our own solar system are also discussed. All this is done in a fashion which integrates the various branches of science required to understand life beyond the Earth: Astronomy, Biology, Chemistry, Geology, and Physics. There are no prerequisites for this course and it may be taught in a team fashion by faculty members from various scientific disciplines.

ISC 1003 - Natural Disasters – Causes, Consequences, Human Response

3 Credit Hours
(Fall, Spring, Summer)

This interdisciplinary course investigates natural catastrophic events, such as earthquakes, volcanic eruptions, tsunamis, hurricanes and floods. This class will use an environmental studies approach to examine how modern society exacerbates the damage caused by these natural phenomena and methods to mitigate human suffering. The student will gain an appreciation of humankind's relationship to the natural environment.

ISC 4145 - Environmental Systems

3 Credit Hours
(Offered as needed)

Environmental Systems will expose students to a broad overview of the structure and processes occurring on Earth. Students will gain a broad understanding of the interactions between the atmosphere, biosphere, lithosphere, and hydrosphere. Course topics will be related to current environmental issues and our local ecosystems. This course is focused on Earth System Science content with development of methods specific to teaching middle school science as a secondary objective.

Prerequisite(s): (1) any two-course laboratory sequence in the natural sciences (i.e., Principles of Biology I & II, Principles of Geology I & II, College Chemistry I & II, Physics I & II, College Physics I & II, Anatomy & Physiology I & II); (2) any GLY course; (3) and either CHM1020 (Chemical Science) or PHY1020 (Physical Science).

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSC 2905 - Independent Study – Physical Science

1 Credit Hour
(Fall, Spring, Summer)

Directed study and individual projects designed to meet the needs of students interested in a specialized area of the physical sciences for which present course availability is limited. Meets specific general education requirements.

This course may be taken up to four times for credit.

Physics

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

Political Science

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POT 1002 - History and Ideas of Political Science

3 Credit Hours ❖
(Offered as needed)

This course reviews classical ideas, political theory and institutions from a historical and comparative viewpoint. It examines the rise of the State, its organization, economic systems, the use of force, and persuasion. This course qualifies as having an international and/or diversity focus for Teacher Education programs common prerequisites.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

Public Administration

PAD 3003 - Public Service Operations

3 Credit Hours
(Offered as Needed)

An introduction to public administration and policy in America. This course is designed to provide undergraduate students a basic understanding and appreciation of the administration of the public sector. It is intended to provide an overview of public administration for students interested in public service and for students, who as good citizens, want an appreciation of the complexities of public management.

Prerequisite(s): upper division standing.

PAD 3393 - Advanced Emergency Management

3 Credit Hours
(Offered as needed)

This course examines functional demands that emergency managers should be aware of in crafting emergency management policies and programs. Students investigate how public policy choices impact emergency planning and the consequences of a disaster. It is designed to help the student develop an in-depth understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

Prerequisite(s): upper division standing.

PAD 3820 - Public Safety System Integration

3 Credit Hours
(Offered as needed)

This course compares and contrasts the various components of the public safety sector. The course examines the working relationship between public safety organizations and the effectiveness of the various service delivery models.

Prerequisite(s): upper division standing.

PAD 3874 - Community Relations

3 Credit Hours
(Offered as Needed)

This course will expose the student to community relations theory and practice within a broad range of public safety organizations. Students will understand why positive community perception of public safety is critical to funding and operational effectiveness. Students will explore the public safety responsibility in establishing business continuity both in preplanning and following a disaster. Each student will gain the insight and skills necessary to be effective in the community relations function of public safety administration.

PAD 3882 - Issues in Public Service Administration

3 Credit Hours
(Offered as Needed)

This course focuses on current issues and trends in the field of public service administration. The course is structured to introduce management and administrative topics in public service, examine the implications to the field, and reformulate recommendations. This course will begin developing skills in project design and presentation. This course will enhance critical thinking skills.

Prerequisite(s): upper division standing.

PAD 4878 - Capstone: Public Service

3 Credit Hours
(Offered as Needed)

This course provides an opportunity for the student to complete a professional project and apply information and skills studied in core and concentration program courses under the direction of the professor. Successful completion of the course requires demonstration of achievement of the program's learning outcomes. This course should be completed in the last term before graduation.

Prerequisite(s): upper division standing.

PAD 4933 - Special Topics in Public Administration

3 Credit Hours
(Offered as needed)

This is an individual or group course designed to provide students with the opportunity to pursue a special topic(s) from the area of public administration in depth; may be repeated as topics change.

Prerequisite(s): Upper division standing and permission of the instructor.

This course may be taken up to three times for credit.

Psychology

CLP 1001 - Personal Adjustment

3 Credit Hours
(Fall, Spring, Summer)

Psychology of adjustment, application of psychological theory for problem solving and better mental health. An examination of psychological defense mechanisms and adaptive behavior.

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Radiography

RTE 1000 - Introduction to Radiologic Technology

2 Credit Hours
(Summer, Offered as needed)

This course is designed to provide an overview of the history of radiography and the role and scope of practice of the practitioner in the healthcare delivery system. Organizations, accreditation, federal agencies, regulatory agencies (including OSHA) and professional credentialing will be discussed. Content includes a fundamental background in medical law, ethics, human diversity and patient consent. The student will examine a variety of ethical issues and dilemmas found in clinical practice, as well as developing a better understanding of patients, the patient's families, and professional peers through comparison of diverse populations based on value systems, cultural and ethnic influences, communication styles and socioeconomic influences. Radiographic medical terminology and pharmacology will be covered. Site specific clinical education paperwork will be completed and students will perform required clinical observations in imaging departments. Background check, drug screening, training and clinical site approval mandatory.

Prerequisite(s): admission to the Radiography Program.

RTE 1111 - Introduction to Radiographic Patient Care

2 Credit Hours
(Fall)

This course is designed to prepare radiography students to provide basic patient care. Basic concepts of patient care will be described, as well as infection control procedures and standard precautions. This course includes hospital specific training. Health risks, life stages, HIV/AIDs and domestic violence will be discussed. This course also includes an introduction to medical and radiographic terminology. Topics include vital signs, venipuncture, body mechanics and transport, verbal/nonverbal communication, and some pharmacology.

Prerequisite(s): admission to the Radiography Program.

RTE 1418 - Radiographic Techniques I

3 Credit Hours
(Fall)

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. This course introduces the student to a comprehensive study and theory of the production of x-rays and primary exposure factors of radiographic imaging. The image parameters of density, contrast, recorded detail, image distortion and blur will be studied as well as ancillary devices and equipment required to produce a quality radiographic image. Digital imaging with related accessories will be emphasized. Class demonstrations and exercises are used to demonstrate application of theory.

Prerequisite(s): MAC 1105 or other Gordon Rule math course and admission to the Radiography Program.

RTE 1457C - Radiographic Techniques II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1418 Radiographic Techniques I. Course content includes the basics of magnetism, electricity, motors, generators, rectifying systems, x-ray tube and filament circuitry. Topics in electromagnetism such as self and mutual induction, high voltage transformation, and AC rectification will be emphasized. An introduction of special radiographic methods will include automatic exposure control, computers, fluoroscopy and image intensification, subtraction radiography, conventional tomography, digital image

receptors, and digital image acquisition and manipulation.

Prerequisite(s): RTE 1418.

Corequisite(s): RTE 1513C

RTE 1503C - Radiographic Procedures I

4 Credit Hours
(Fall)

This course is designed to provide the Radiography student with instruction in radiographic examinations of the chest, abdomen, upper extremity and lower extremity. An introduction to medical and radiographic terminology, radiographic anatomy, and image critique are also included.

Prerequisite(s): BSC 1085C and admission to the Radiography program.

RTE 1513C - Radiographic Procedures II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1503C. It is designed to provide the student with instruction in radiographic procedures and anatomy in the distal extremities, hip region, spine, ribs, and sternum and the cranium. Critical thinking, medical and radiographic terminology, as well as image critique are emphasized.

Prerequisite(s): RTE 1503C, RTE 1804L , and BSC 1086C

Corequisite(s): RTE 1814L.

RTE 1804L - Radiography Clinical Education I

3 Credit Hours
(Fall)

This course involves the practical application of the theories covered in RTE 1503C and RTE 1000. Rotations provide experience with various imaging systems, protocols, and patient care. Students observe, assist and perform basic radiographic procedures (chest, abdomen and extremities) under direct supervision. This course emphasizes patient care and critical thinking. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1000

Corequisite(s): RTE 1503C

RTE 1814L - Radiography Clinical Education II

3 Credit Hours
(Spring)

This course is a continuation of Radiography Clinical Education I. This clinical training emphasizes lower and upper extremity. Medical and radiographic terminology, patient care, critical thinking and communication skills are

emphasized. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1804L

Corequisite(s): RTE 1513C.

RTE 1824L - Radiography Clinical Education III

4 Credit Hours
(Summer)

This course is a continuation of Radiography Clinical Education II. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I and II. The student will gain experience and develop clinical competence in general radiographic procedures such as the cranium and specialized contrast studies. Advanced patient care skills, critical thinking, imaging and exposure techniques, radiation protection application and image processing will be emphasized. This rotation covers clinical experience in all phases of fundamental radiologic procedures and image critique. Students will rotate through ancillary departments in this course.

Prerequisite(s): RTE 1814L

Corequisite(s): RTE 2523C.

RTE 2061 - Radiographic Preparation for Practice

4 Credit Hours
(Spring)

This course is designed review information in preparation for the student to take the American Registry of Radiologic Technologist (ARRT) registry examination. The course will cover patient care and education, image production, equipment operation and maintenance, radiographic procedures and radiation protection. The student will also be given simulated registry examinations for practice and assessment purposes.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2854L.

RTE 2385 - Radiographic Protection and Biology

3 Credit Hours
(Fall)

This course is designed to provide the student with an overview of the principles of interaction of ionizing radiation with living systems. Ionizing effects on molecules, cells, tissues and the body as a whole are presented, along with factors affecting biological response, including; acute, chronic, stochastic and non-stochastic effects. This course is also designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and healthcare organizations are incorporated, as are the various methods of monitoring radiation exposure and acceptable dose limit values.

Prerequisite(s): RTE 1000, RTE 1418, RTE 1457C, RTE 2523C

Corequisite(s): RTE 2844L.

RTE 2473 - Radiographic Quality Assurance

2 Credit Hours
(Fall)

This course is designed to introduce the radiography student to evaluation methodology of radiographic systems to assure consistency in the production of quality images. Image critique, fluoroscopy, malfunctions, and specifications are some of the topics covered in the course.

Prerequisite(s): RTE 1418, RTE 1457C

Corequisite(s): RTE 2844L.

RTE 2523C - Radiographic Procedures III

3 Credit Hours
(Summer)

This course is a continuation of RTE 1513C covering cranium procedures and positioning. It is designed to provide the student with instruction in more complex radiographic procedures such as fluoroscopy, urinary studies, bone age, trauma, pediatrics, mobile and surgical radiography. Included is instruction in additional modalities and studies such as CT, MRI, arthography, myelography, and vascular studies. Attention will be given to the specialized equipment, contrast media, critical thinking and techniques necessary to perform these procedures. Radiographic anatomy, pathology, and critique of images are included in this course.

Prerequisite(s): RTE 1513C

Corequisite(s): RTE 1824L.

RTE 2533C - Radiographic Procedures IV

2 Credit Hours
(Fall)

This is a continuation of RTE 2523C, with emphasis on special procedures and additional modalities. Students are required to complete observations hours within specialty areas.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L

RTE 2571 - Introduction to Computed Tomography

1 Credit Hour
(Spring)

This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency.

Prerequisite(s): RTE 1457C

RTE 2782 - Radiographic Pathology

3 Credit Hours
(Spring)

This course is designed to introduce theories of disease causation and the pathophysiologic disorder that compromise healthy persons. Etiology, pathophysiologic responses, clinical manifestations, and radiographic appearance of alterations in body systems will be presented. Emphasis will be placed on pathological findings on diagnostic radiographic images.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2854L.

RTE 2844L - Radiography Clinical Education IV

5 Credit Hours
(Fall)

This course is a continuation of RTE 1824L. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I, II and III. The student will gain experience and develop clinical competence in specialized imaging procedures, and mobile, surgical and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 1824L

Corequisite(s): RTE 2385.

RTE 2854L - Radiography Clinical Education V

5 Credit Hours
(Spring)

This course is a continuation of RTE 2844L. The terminal objective for this course is to prepare the student for employment as an entry level technologist. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I-IV and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2061.

RTE 2910 - Radiographic Evidence Based Practice

1 Credit Hour
(Fall)

This course is designed to develop the student's research, writing and oral presentation skills; while completing assignments, both independently and collaboratively, with minimal direction and supervision. Methods of research, appropriate style of writing, citing work, and using APA format will be covered.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L.

♦This college credit course may not be applied toward the A.A. degree and normally is not intended for transfer unless the student transfers to a baccalaureate in radiologic sciences degree program that is specified under the Florida Statewide AS to BS Articulation Agreement.

Reading

REA 1205 - Reading Across the Genres I

3 Credit Hours
(Offered as needed)

This college-level reading course employs a variety of literary genres as the source material for building student skills in comprehension, context clues, reading speed, critical analysis, vocabulary, and other related reading skills. Students will be exposed to numerous styles and levels of reading material including novels, short stories, critical essays, drama, news reporting. Students will also develop a personal reading preference profile and learn how to identify books, magazines and other reading material commensurate with that profile.

Prerequisite(s): PERT placement score of 106 or higher.

Religion

REL 2300 - Introduction to World Religions

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

This course will explore the principles and practices of the world's major religious traditions. The religions will be studied in their historical and contemporary forms. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

REL 2930 - Religion – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

Safety and Quality Control

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

Sign Language

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ASL 1150 - American Sign Language II

4 Credit Hours
(Fall, Spring)

This course increases the student's American Sign Language vocabulary and uses more complex expression of thoughts, ideas, and emotions and increases the receptive and expressive proficiency of the student in both sign and finger spelling.

Prerequisite(s): ASL 1140 or an equivalent course with a grade of "C" or better

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ASL 2160 - American Sign Language III

4 Credit Hours
(Summer)

A conversational course in American Sign Language utilizing skills and vocabulary from American Sign Language I and II and building on these to form more complex expressions in American Sign Language. Impromptu and planned stories, dialogues and skits will be performed. Receptive and expressive finger spelling will be advanced. No voice will be used for the majority of classroom time.

Prerequisite(s): ASL 1150 or an equivalent course with a grade of "C" or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Small Business Management

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Sociology

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SYG 2430 - The Family and Society

3 Credit Hours
(Fall, Spring, Summer)

An examination of the problems which arise out of participation in marriage, family and community situations. Designed to provide students with a basic understanding of the dynamics of family interaction, the effects upon the children, and the family's relationship to and participation in the community.

Social Sciences

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ISS 1905 - Independent Study – Social Science

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of students interested in a specialized area of the social sciences for which present course availability is limited.

This course may be taken up to four times for credit.

Spanish

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2221 - Spanish IV

4 Credit Hours
(Offered as needed)

Completion of intermediate level review of grammar, readings in Spanish literature, and development of conversational and writing skills.

Prerequisite(s):
SPN 2220 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Speech and Debate

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

Sports, Fitness & Recreation

LEI 1544 - Outdoor Recreation Management

3 Credit Hours
(Fall, Spring)

This course examines the fundamental influences on outdoor recreation. The course also provides information on hazards, conservation considerations, and safety factors in planning and organizing outdoor recreations. Basic first aid, CPR, and AED training is incorporated as it pertains to outdoor recreation. Field trips may be assigned as warranted.

Theater

THE 1905A - Independent Study – Theater

1 Credit Hour
(Offered as needed)

A defined independent study which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule. Departmental approval required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): Approval from department chair, a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2071 - Humanities – Cinema Appreciation

3 Credit Hours † ¶
(Fall, Spring, Summer)

An introduction to the origin, development, cultural aspects and analysis of cinema topics. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2300 - Dramatic Literature

3 Credit Hours † ¶
(Fall, Spring)

Survey of dramatic works from the Greeks to the 20th century, with emphasis on the plays of the 19th and 20th centuries; intensive investigation and script analysis with reports, lectures and discussions. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

THE 2820 - Musical Theater Workshop

3 Credit Hours
(Summer)

An introduction to creative dramatics and children's theater. Topics span a wide range of interests; creative experience, children and theater, workshop procedure, script selection, rehearsal and performance.

THE 2821 - Musical Theater Workshop II

3 Credit Hours
(Summer)

Creative dramatics introduces the many elements of theater: dance, voice and musical theater. Topics span a wide range of interests: the creative process, workshop procedures, rehearsal and performance. Creative Dramatics will focus on producing a final performance.

Prerequisite(s): THE 2820.

THE 2930 - Theater – Special Topics

3 Credit Hours
(Fall, Spring)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering

and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2170 - Introduction to Theatre Production Documentation

3 Credit Hours
(Offered as Needed)

This course is an introduction to the presentation of information necessary to document the design and production process.

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

TPA 2276C - Entertainment Technology - Crafts

3 Credit Hours
(Spring)

This course presents the practices and principles of advanced woodworking, welding, smithing, casting, ceramics, plaster work, fiberglass and plastic technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented that will use items created in a realized production.

Prerequisite(s): TPA 1210.

TPA 2292 - Technical Theatre Lab III

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1291

TPA 2301 - Technical Theatre Lab IV

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 2292

TPA 2331 - Costume Construction

3 Credit Hours
(Offered as needed)

An introduction to costume construction techniques and wardrobe design. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in costume construction.

Prerequisite(s): TPA 2232

TPA 2343 - CAD for the Theatre

3 Credit Hours
(Offered as Needed)

This course is project oriented covering fundamental through advanced material in computer aided drafting and design and its application for the theatre.

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1192 - Rehearsal and Performance III

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1191.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic

through modern.

Prerequisite(s): TPP 2110.

TPP 2120 - Improvisation

3 Credit Hours
Offered as needed

This course explores the use of creativity and imagination, engaging the actor in a wide variety of improvisational theatre games.

TPP 2141 - Acting in Shakespeare

3 Credit Hours
(Offered as needed)

This course is an introduction to the concepts, principles, and skills needed to develop characters in Shakespeare's plays. The course focuses on the hidden clues in the text to discover character choices and meaning. Specific analysis and the techniques of scansion are introduced as they relate to character interpretation. Application of these techniques will be presented in scenes and monologues.

TPP 2150 - Advanced Scene Study

3 Credit Hours
(Fall)

This course is a continuation of the processes and concepts of TPP 2111, Acting II, with the addition of new techniques to create dynamic and engaging characterizations through performance.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2250 - Introduction to Musical Theatre

3 Credit Hours
(Fall)

Introduction to the study of Musical Theater analysis, creation, and performance with an emphasis on singing, dancing, and acting.

TPP 2301 - Directing I

3 Credit Hours
(Offered as needed)

A beginning course in the study, development and training in directing for the theater. Although not a prerequisite, students are encouraged to take Acting I and II before Directing I.

TPP 2302 - Directing II

3 Credit Hours
(Offered as needed)

Directing II is a continued study of the basic principles of directing for the theater with emphasis in the continued study, development and training in directing for the theater.

Prerequisite(s): TPP 2301.

TPP 2533 - Stage Combat I (Unarmed & Rapier)

3 Credit Hours
(Spring)

Through in-class study and performance the student will develop an understanding of and proficiency in the safe techniques of unarmed and rapier stage combat which are required of a theatrical performer. Application of these techniques will be presented in two scenes, one for unarmed and one for rapier.

TPP 2930 - Theater Performance – Special Topics

3 Credit Hours
(Fall, Spring, Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

Transportation and Logistics

TRA 0080 - Tractor Trailer Truck Driver

320 Clock Hours
(Spring)

This course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety, accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

TRA 0086 - Tractor Operator

150 Clock Hours
(Fall)

This course is designed to build on the skills and knowledge students learned in the Heavy Equipment Maintenance Technician course for entry into the Heavy Equipment Operations industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study pneumatic and crawler-type tractor operations.

TRA 0650 - Natural Gas Distribution I

75 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance.

TRA 0650B - Natural Gas Distribution IB

75 Clock Hours
(Fall)

This course is prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance. This course continues the knowledge acquired in the TRA0650.

TRA 0651 - Natural Gas Distribution II

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Prerequisite(s): TRA 0650

TRA 0652 - Natural Gas Distribution III

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Welding

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides instruction and demonstration using Shielded Metal Arc Welding (SMAW). Topics include visually inspect of welds, and basic SMAW technical terminology. Basic structural welding techniques will be demonstrated in accordance with American Welding Society (AWS) D1.1 Structural Welding Code. Tack welding and metal joint fit of carbon steel is covered in this course.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course introduces structural fillet welds in different joint positions in accordance with AWS D1.1 Structural Welding Code. Fillet welds will be performed on carbon steel plate of various thicknesses.

Prerequisite(s): PMT 0121C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides the student with instruction on joint design, joint preparation, and fit-up, and performance of groove welds with backing. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds with backing and make acceptable groove welds with backing using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0122C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Spring, Summer)

This course provides the student with advanced instruction on joint design, joint preparation, and fit-up, and performance of open groove welds. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of open groove welds and make acceptable open groove welds in all positions using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0126C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0134C - Gas Metal Arc Welding (GMAW)

50 Clock Hours
(Spring, Summer)

This course provides instruction and demonstration using the various transfer methods and techniques of Gas Metal Arc Welding (GMAW). Topics included are safety, equipment set-up, joint design and preparation, and gases.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0145C - Flux-Core Arc Welding (FCAW)

240 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Flux-Core Arc Welding (FCAW) and basic understanding of pipe welding. Welding symbols and blueprint reading are covered in this course.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0155C - Gas Tungsten Arc Welding (GTAW)

160 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to gas tungsten arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Gas Tungsten Arc Welding (GTAW), and basic understanding of pipe welding.

PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding

200 Clock Hours
(Offered as needed)

This course introduces the student to the practices and procedures of welding carbon steel pipe using the Shielded Metal Arc Weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation and fit-up. Upon completion, students should be able to demonstrate pipe positions, proper electrodes selection, proper joint geometry, joint preparation, fit-up, and proper SMAW pipe welding techniques in accordance with applicable codes.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0171C - SMAW-GTAW Pipe Welding

400 Clock Hours
(Offered as needed)

This course is designed to provide the students with skills in welding carbon steel pipe using Shielded Metal Arc Weld process and Gas Tungsten Arc Weld (GTAW) processes using proper filler metals in the 2G, 5G, and 6G positions. Upon completion, students should be able to perform shielded metal arc welding process and gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in the 2G, 5G, and 6G position in accordance with the applicable code.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0173C - Specialty Pipe Welding

150 Clock Hours
(Offered as needed)

This courses covers advanced pipe welding and is designed to build advanced GTAW skills. This course covers advanced Gas Tungsten Arc Welding (GTAW) on alloy pipe and heavy wall carbon pipe.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Zoology

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

Reading/English Developmental Ed.

ENC 0017 - Integrated Reading and Writing I

4 Credit Hours
(Fall, Spring, Summer)

This course is designed to develop reading comprehension and writing language skills for students whose entry level placement scores do not meet requirements for degree credit (not applicable for degree completion). The course includes a thorough review of English grammar and conventions and practice in writing paragraphs and essays while building skills in vocabulary and academic reading comprehension. Students must pass the class with a "C" or better grade.

Prerequisite(s): Appropriate score on PERT or other approved assessment.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 0027 - Integrated Reading and Writing II

4 Credit Hours
(Fall, Spring, Summer)

This course is designed to develop reading comprehension and writing language skills for students whose entry level placement scores do not meet requirements for degree credit (not applicable for degree completion). The course includes a review of English grammar and convention and practice in writing persuasive essays while building skills in vocabulary and academic reading comprehension. Student must pass the class with a "C" or better grade.

Prerequisite(s): Minimum grade of "C" in ENC 0017 or appropriate PERT or other approved assessment score.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

REA 0056 - Developmental Reading Module

2 College Prep Credits
(Fall, Spring, Summer)

This course is designed to increase the student's ability to comprehend college-level, written material (not applicable for degree completion). Conducted in a lab setting, this course is self-paced, designed to allow students to focus on their individual development of higher level reading skills and vocabulary needed for literal and critical interpretation of passages similar to those used in college texts. This course may be taken in place of REA 0017. Students must pass the class with a "C" or better and obtain a passing score on the end of course exam.

Prerequisite(s): Students must score 96-105 on the PERT or elective basis score 106 or higher on the PERT.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

Catalog Home

View the catalog by clicking on an item in the menu to the left.
"My Catalog" allows you to bookmark programs, courses and pages of special interest.

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The provisions of this publication are not to be construed as a contract between the student and Northwest Florida State College. The college reserves the right to change any provision or requirement when such action becomes necessary. Official announcements are available through the Office of Academic Affairs, Student Affairs and are posted in the Student Services Center, and when possible, listed in the Schedule of Classes. Students are responsible for meeting, in full, the appropriate requirements for graduation or program completion and are advised to work closely with counselors/advisors in planning of a program of study. Students are expected to familiarize themselves with all rules and regulations of the college.

Notice of Equal Access / Equal Opportunity and Nondiscrimination

Northwest Florida State College is dedicated to the concepts of equity and equal opportunity. It is the specific intention of the college not to discriminate on the basis of age, color, ethnicity, disability, marital status, national origin, race, pregnancy, religion, genetic information, or gender, in its employment practices or in the admission and treatment of students in its programs or activities.

Title IX of the Education Amendments of 1972 (20 U.S.C. ss1681) is an all-encompassing federal law that prohibits discrimination based on the sex of students, employees, and third parties when appropriate, of educational institutions which receive federal financial assistance. Sexual harassment of students, which includes acts of sexual violence, is a form of sex discrimination prohibited by Title IX. Northwest Florida State College complies with all

aspects of this and other federal and state laws regarding non-discrimination.

Anyone with questions about compliance or a complaint regarding harassment or discrimination, including sexual harassment and sexual violence of Title IX, should contact the College's Equity Coordinator using the following contact information:

Roberta Mackey

Executive Director of Human Resources, Equity Coordinator
100 College Blvd. Niceville, FL 32578
Building: 320
Phone: (850) 729-5337

Email: mackeyr@nwfsc.edu

Archived Catalogs

2013-2018 e-catalogs

	2017-2018 e-catalog updated through 11/17/17	2016-2017 e-catalog updated through 4/19/17
2015 - 2016 e-catalog updated through 6/1/16	2014 - 2015 e-catalog updated through 1/6/15	2013 - 2014 e-catalog updated through 2/12/14

2012-2009 Bookmarked Catalogs

2012-2013 Instructions for Use	2012-2013 full catalog .pdf
2011-2012 Instructions for Use	2011-2012 full catalog .pdf
2010-2011 Instructions for Use	2010-2011 full catalog .pdf
2009-2010 Instructions for Use	2009-2010 full catalog .pdf

2008-1997 Catalogs by Sections or Full Catalog

2008-2009 .pdf by Sections	2008-2009 full catalog .pdf
2007-2008 .pdf by Sections	2007-2008 full catalog .pdf
2006-2007 .pdf by Sections	2006-2007 full catalog. pdf - not yet available
2005-2006 .pdf by Sections	2005-2006 full catalog. pdf - not yet available
2004-2005 .pdf by Sections	2004-2005 full catalog. pdf - not yet available
2003-2004 .pdf by Sections	2003-2004 full catalog. pdf - not yet available
2002-2003 .pdf by Sections	2002-2003 full catalog. pdf - not yet available
2001-2002 .pdf by Sections	2001-2002 full catalog. pdf - not yet available
2000-2001 .pdf by Sections	2000-2001 full catalog. pdf - not yet available
1999-2000 .pdf by Sections	1999-2000 full catalog. pdf - not yet available
1998-1999 HTML Bookmarked Sections	1998-1999 full catalog. pdf - not yet available
1997-1998 HTML Bookmarked Sections	1997-1998 full catalog. pdf - not yet available

1996 and Earlier Catalogs (.pdfs)

- 1996-1997 Course Catalog
- 1995-1996 Course Catalog
- 1994-1995 Course Catalog
- 1993-1994 Course Catalog
- 1992-1993 Course Catalog
- 1991-1992 Course Catalog
- 1990-1991 Course Catalog
- 1989-1990 Course Catalog
- 1988-1989 Course Catalog
- 1987-1988 Course Catalog
- 1986-1987 Course Catalog
- 1985-1986 Course Catalog
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- 1983-1984 Course Catalog
- 1982-1983 Course Catalog
- 1981-1982 Course Catalog
- 1980-1981 Course Catalog
- 1979-1980 Course Catalog
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- 1976-1977 Course Catalog
- 1975-1976 Course Catalog
- 1974-1975 Course Catalog
- 1973-1975 Course Catalog
- 1972-1973 Course Catalog
- 1971-1972 Course Catalog
- 1970-1972 Course Catalog
- 1969-1970 Course Catalog
- 1967-1969 Course Catalog (This catalog was used for two years)
- 1966-1967 Course Catalog
- 1965-1966 Course Catalog
- 1964-1965 Course Catalog

Browser Help

It may be necessary at times to clear the cache on a web browser. Please follow the instructions below for your browser.

Microsoft Internet Explorer

Press [Ctrl] + [Shift] + [Del] and check the " Cookies and website data " and uncheck " Preserve Favorites website data " checkboxes.

Mozilla Firefox

Press [Ctrl] + [Shift] + [Del] and change the "Time range to clear" to "Everything" and click "Clear now".

Google Chrome

Press [Ctrl] + [Shift] + [Del] and change "Clear the following items from" to "the beginning of time" and click "Clear browsing data".

Apple Safari

Press (OPTION + COMMAND + E).

AA Major Fields of Interest

AA Major Fields of Interest categorize similar academic degrees so that students can find like career fields and university transfer programs. The AA Transfer Majors indicate the courses needed for transfer into specific university programs at the institutions listed. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

The following list indicates the AA transfer majors that can be completed taking courses at NWFSC. It is not a complete list of all university transfer majors. The Common Course Prerequisite Manual lists all university transfer programs available in the State of Florida.

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Associate in Arts Degree

The Associate in Arts degree is equivalent to the first two years of a bachelor's degree program and is offered for those students planning to transfer to a four-year institution or to remain at NWF State College to complete the last two years of a bachelor's degree program. The AA degree is awarded upon satisfactory completion of 60 credit hours of general education and college credit electives, attainment of the appropriate minimum grade point averages, and completion of all other applicable college graduation requirements, including the Speaking-Across-the-Curriculum and Technology-Across-the-Curriculum requirements. Although the number of credits and specific courses required for a bachelor's degree may vary across upper-division schools, the Florida community colleges and universities enjoy an articulation agreement, which guarantees certain transfer rights for students who complete the AA degree.

A.A. degree students should work closely with an Academic Advisor or faculty advisor to select the appropriate courses to meet their degree goals.

Graduation Requirements for the AA Degree

The A.A. degree curriculum requires the following.

- Complete a minimum of 60 college credits per the following distribution as outlined in the AA Degree General Education Requirements:
    - Complete 36 credit hours of general education courses distributed appropriately across the Communications, Humanities, Social Sciences, Mathematics, Natural Sciences, and General Education Elective categories presented in the AA Degree General Education Requirements section of the catalog for specific courses.
    - Completion of two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination.
    - Complete 24 credit hours of college credit electives. (Students should consult with a counselor or advisor to select the electives most appropriate to their intended baccalaureate program.)
- Meet the Gordon Rule (FAC Rule 6A-10.030) minimum grade and writing requirements:
    - Attain a grade of "C" or higher in each Gordon Rule writing course (any general education course from the Communications or Humanities categories, and those designated as Gordon Rule in the Social Science category) whether credits in such courses are earned at NWF State College or elsewhere.
    - Complete the Gordon Rule writing requirement (students who complete 6 credits each from the Communications and Humanities categories and an additional Gordon Rule Social Science course will satisfy this requirement).

    - Attain a grade of "C" or higher in each Gordon Rule Mathematics course (any course from the Mathematics category that is used to meet AA general education requirements), whether credits in such courses are earned at NWF State College or elsewhere.
- Meet the Civic Literacy Competency (FAC Rule 6A-10.02413). All first-time-in college students beginning in the 2018-19 academic year must demonstrate civic literacy competency prior to graduation either through successful completion (with a grade of "C" or higher) of POS 1041 or AMH 2020 or by achieving a passing score on an assessment.

Assessment	Standard Score
AP Government and Politics: United States	3
AP United States History	4
CLEP: American Government	50

- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete applicable admission requirements for the program. See the Admissions section of the catalog.
- Complete at least 25% of the course work towards the program at NWFSC.
- Satisfy all outstanding obligations to the college.
- Apply to graduate by the published deadline.

Transferring to another Four-Year College or University within the State of Florida:

Faculty members, counselors and advisors will gladly assist students in achieving a smooth transfer to other institutions in Florida. Liaison representatives from the respective public institutions in the state are eager to help. Several of the liaisons make regular visits to campus and will meet directly with students to answer questions. The names of the liaisons and dates of upcoming visits are available in the Advising Center in the Student Services Center on the Niceville Campus. In addition, Common Prerequisite Manuals for the Florida State University System are available on RaiderNet or at www.flvc.org.

It is desirable that students transferring to a senior institution plan their program so that common prerequisites can be completed for the upper-division transfer school for their major. It is best for the student to complete the entire two-year degree program prior to transfer, as A.A. graduates who transfer to one of the institutions in the Florida State University System (SUS) enjoy certain protections under the statewide articulation agreement. These rights are presented in the "Student Bill of Rights".

NWF State College offers the necessary prerequisites for most of the State of Florida University Baccalaureate Programs. Students are encouraged to consult a current catalog from the upper-division school where they plan to transfer in addition to meeting with a college advisor or faculty member to acquire an official program plan of study for their intended major.

Special Foreign Language Requirements for Entry into Upper-Level Florida Universities:

Effective August 1, 1990, according to requirements of the Florida Board of Regents, new applicants to any of the state universities must have completed two sequential credits in high school foreign language, a minimum of 6 credit hours in one foreign language at the college level or an appropriate score on an approved CLEP examination. There are two exceptions to this requirement: 1) students who received an A.A. degree prior to September 1, 1989, or 2) students who enrolled in a program leading to an A.A. degree prior to August 1, 1989 and maintained continuous enrollment. Students who are not exempt but fail to satisfy the requirement, may be admitted to the university as part of the 5% admissions exceptions group but will be required to complete eight-ten credit hours in one foreign language as a graduation requirement, regardless of the requirements in the student's major. Students transferring into the Florida SUS without an A.A. degree or fewer than 60 transferable credits must meet this foreign language requirement before going on to the upper division. NWF State College offers the necessary coursework in French, Spanish, Chinese and American Sign Language (ASL) to meet the Florida SUS admission requirements.

Student Bill of Rights

Florida Community College Associate in Arts (AA) Degree graduates are guaranteed rights under the Statewide Articulation Agreement (State Board of Education Rule 6A-10.024).

AA Transfer Majors

AA Transfer Majors indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

The following list indicates the AA transfer majors that can be completed taking courses at NWF State College. It is not a complete list of all university transfer majors. The Common Course Prerequisite Manual lists all university transfer programs available in the State of Florida.

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWF **State College** *recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.*

Associate Degree

AA - Associate in Arts General Degree

Admission Program Objective Code AAGD
State CIP Code 1192401010

The AA is primarily intended as a transfer degree for students continuing to a 4 year bachelor's program at a university or state college. The AA Transfer Programs indicate the required courses needed to be eligible to be admitted to the university program at the institutions listed.

Associate in Arts students must complete 60 college credits to complete the degree; 36 of these credits must be general education credits distributed across five subject area categories. A student must satisfy the required number of credits in each category. The remaining 24 elective credits should be selected in consultation with an advisor, who will assist with selecting the college credits most advantageous to the student's educational goals.

General Education

In consultation with an advisor, choose appropriate General Education courses that fulfill your AA Degree Concentration for University Transfer Major. Select courses from each area as listed below; see the AA Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Communication Skills **3 Credit Hours**
- ____ ____ - Core Humanities **3 Credit Hours**
- ____ ____ - General or Core Humanities **3 Credit Hours**
- ____ ____ - Core Mathematics **3 Credit Hours**
- ____ ____ - General or Core Mathematics **3 Credit Hours**
- ____ ____ - Biological Sciences **3 Credit Hours****
- ____ ____ - Physical Sciences **3 Credit Hours****
- ____ ____ - Behavioral Social Sciences **3 Credit Hours*****
- ____ ____ - History/Government Social Sciences **3 Credit Hours*****
- ____ ____ - Additional General Education Credits **6 Credit Hours**

** One or both of the Biological or Physical Sciences must come from a core group. See AA Degree General Education Requirements for details.

*** One or both of the Social Sciences must come from a core group. See AA Degree General Education Requirements for details.

Total General Education Credits Required: 36

Foreign Language

A minimum of 6 credit hours must be earned in one foreign language at the college level, or successful completion of two sequential credits in high school foreign language, or an appropriate score on an approved CLEP examination.

- ___-____ - Foreign Language
- ___-____ - Foreign Language

AA Elective Requirements

In consultation with an advisor, select appropriate AA degree college credit electives that fulfull your AA Degree Concentration for University Transfer Major:

- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**
- ____ ____ - Elective **3 Credit Hours**

Total Elective Credits Required: 24

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

AA General Degree (AA) (AAGD)

First Year

Fall Semester

Core Mathematics **- 3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Core Humanities **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Core or General Mathematics **- 3 Credit Hours**

ENC 1102 - English Composition II **3 Credit Hours ¶**

Core or General Humanities **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

Biological Science* **- 4 Credit Hours**

Behavioral Social Science** **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Elective **- 3 Credit Hours**

Total Semester Hours: 16

Spring Semester

Physical Science* **- 4 Credit Hours**

History/Government Social Science** **- 3 Credit Hours** Elective or Additional General Education Hours*** **- 4 Credit Hours** Elective **- 3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 60
* At least one Science course must come from the core. ** At least one Social Science course must come from the core. *** Students who have already satisfied the 36 hour General Education requirement may take a general Elective.

AA Degree Checklist:

- Have you completed a minimum of 60 credit hours in the following areas?
    - 36 Hours of General Education
        - 6 hours in Communications ("C" or better)
        - 6 hours in Mathematics ("C" or better)
        - 6 hours in Humanities ("C" or better)
        - 8 hours in Natural Science
        - 6 hours in Social Sciences ("C" or better in History/Government Social Science category)
        - 4 hours in Additional General Education Credits (if needed)
    - 24 hours of college credit A.A. transferable electives
- Have you completed at least 15 of the 60 credits at NWF State College?
- Have you completed the foreign language requirement?
- Have you met the minimum 2.0 GPA requirements for the A.A.?
- Have you met the Civic Literacy Competency requirement for the A.A?
- Have you applied for graduation by the advertised deadline?

AA Major Field of Interest: Arts, Humanities, Communication & Design

AA Transfer Major: Art History & Appreciation

Admission Program Objective Code: ARTA
State CIP Code: 1192401010

Offered at FIU, FSU, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500703
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- XXXXXXX - Competency requirement for a single foreign language*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Art, General

Admission Program Objective Code: ART
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, UCF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy

studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARHXXX - Any course with ARH prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Communication and Media Studies

Admission Program Objective Code: COMS
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090199
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Communications (Mass), Media Studies or Converged Communications

Admission Program Objective Code: COMM
State CIP Code: 1192401010

Offered at FGCU, FSCJ, UCF, UNF, USFSP, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090102
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- 18 hours beyond the 36 hours of general education requirements. Cannot include ENC or LIT prefixes*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Digital Media

Admission Program Objective Code: DGMD
State CIP Code: 1192401010

Offered at FSCJ, GCSC, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 100304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

Associate in Arts Degree or Associate in Science Degree in Graphics, Design, Digital Media, Information Technology or related fields.

AA Transfer Major: English Language and Literature

Admission Program Objective Code: ENLI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 230101
* See Note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of

"C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Foreign Language, Multiple

Admission Program Objective Code: FORG
State CIP Code: 1192401010

Offered at UCF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.*

*See Notes on Common Course Prerequisite Manual

AA Transfer Major: General Studies

Admission Program Objective Code: GENS
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Graphic Design

Admission Program Objective Code: GRPH
State CIP Code: 1192401010

Offered at FAMU, FSU*, UF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500409
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix

AA Transfer Major: History

Admission Program Objective Code: HIST
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 540101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

- AMHXXXX - Any course with the AMH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- WOHXXXX - Any course with the WOH prefix

AA Transfer Major: Honors College (FAU)

Admission Program Objective Code: HONB
State CIP Code: 1192401010

Offered at FAU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 2/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Honors College (NCF)

Admission Program Objective Code: HONA
State CIP Code: 1192401010

Offered at NCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240199, track 1/2
*See note in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interior Design (BAS)

Admission Program Objective Code: INDE
State CIP Code: 1192401010

Offered at SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500408, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Journalism

Admission Program Objective Code: JOUR
State CIP Code: 1192401010

Offered at UCF*, FAMU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a

Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (FSU)

Admission Program Objective Code: LATA
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050134
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Latin American Studies (UCF)

Admission Program Objective Code: LAAS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Liberal Arts & Sciences

Admission Program Objective Code: LIAS
State CIP Code: 1192401010

Offered at FAU, FIU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Motion Picture & Television Technology

Admission Program Objective Code: MOTP
State CIP Code: 1192401010

Offered at FSU*, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500602, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Multi-/Interdisciplinary Studies

Admission Program Objective Code: MULT
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300000
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Music Composition (FSU)

Admission Program Objective Code: MUCO
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500904
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix **4 Credit Hours**
- MV(K/S/V) XX1X (Applied Music course) **2-4 Credit Hours**
- MV(K/S/V) XX2X (Applied Music course) **2-4 Credit Hours**
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Performance (FGCU, FSU, UCF, UNF, USF, UWF)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500903
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic

dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music Studies (USF)

Admission Program Objective Code: MSTU
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 509999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7^{th} chords, augmented 6^{th} chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17^{th} & 18^{th} centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General (FAMU, FAU, FSU*, UF*, FIU*) (Track 1/2)

Admission Program Objective Code: PERF
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU*, UF*, FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic

dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX

- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy

Admission Program Objective Code: PHIL
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Philosophy and Religion

Admission Program Objective Code: PHRL
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 389999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Policy and Administration

Admission Program Objective Code: PUBP
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, IRSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of

"C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Radio & TV Broadcasting

Admission Program Objective Code: RADO
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Religious Studies

Admission Program Objective Code: RELG
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 380201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Rhetorical Speech & Communication

Admission Program Objective Code: RHET
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 231304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Russian & East European Studies

Admission Program Objective Code: RUSS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050105
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Spanish

Admission Program Objective Code: SPAN
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Speech Communication and Rhetoric

Admission Program Objective Code: SPCO
State CIP Code: 1192401010

Offered at FAU, FIU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Studio/Fine Art

Admission Program Objective Code: SDAR
State CIP Code: 1192401010

Offered at FAMU, FGCU,, FIU, FSU*, UCF, UF*, UNF*, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ARTXXXX - Two courses with the ART prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Studio/Fine Art - Graphic Design

Admission Program Objective Code: SDGD
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500702, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- ARHXXXX - Any course with the ARH prefix

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

- GRAXXXX - Any course with the GRA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Urban & Regional Planning

Admission Program Objective Code: URBA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Urban Design

Admission Program Objective Code: URDS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 040401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Music, General - Music Teacher Education (FIU*) (Track 2/2)

Admission Program Objective Code: MTEA
State CIP Code: 1192401010

Offered at FIU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and

advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- MUNXXXX - Any course with MUN prefix
- MV(K/S/V) XX1X (Applied Music course)
- MV(K/S/V) XX2X (Applied Music course)
- XXXXXXX
- Secondary Piano Proficiency (exam)
  * See Notes on Common Course Prerequisite Manual

AA Major Field of Interest: Business

AA Transfer Major: Accounting

Admission Program Objective Code: ACCO
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, IRSC, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520301
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Advertising

Admission Program Objective Code: ADVE
State CIP Code: 1192401010

Offered at UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090903
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Agricultural (Food & Resource) Economics

Admission Program Objective Code: AGRI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Business Administration

Admission Program Objective Code: BUSA
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Business Administration & Management

Admission Program Objective Code: BUSM
State CIP Code: 1192401010

Offered at CC, FAMU, FAU, FGCU, FIU*, FSCJ, FSU*, IRSC, SPC, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Managerial Economics

Admission Program Objective Code: BMET
State CIP Code: 1192401010

Offered at UCF, UNF, USF*, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520601
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business Marketing Management

Admission Program Objective Code: BMKT
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU*, FSU*, UCF, UF*, UNF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521401
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Business, General

Admission Program Objective Code: BUTN
State CIP Code: 1192401010

Offered at FSU*, UCF, USF*, USFSM*, USFSP*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Economics - Business

Admission Program Objective Code: ECOB
State CIP Code: 1192401010

Offered at FAMU, FAU, UF, UNF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Economics - Social Sciences

Admission Program Objective Code: ECON
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU*, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450601, track 1/2
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Entrepreneurship

Admission Program Objective Code: ENTR
State CIP Code: 1192401010

Offered at USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Finance, General (BS) or Banking (BAS)

Admission Program Objective Code: FINB
State CIP Code: 1192401010

Offered at FAU, FGCU, FIU, FSU*, UCF, UF, UNF, USF*, USFSM*, USFSP*, UWF, SPC (BAS)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520801
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial

records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the

activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences,

correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Financial Services

Admission Program Objective Code: FINS
State CIP Code: 1192401010

Offered at UNF, FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Human Resource Management

Admission Program Objective Code: HRMG
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Human Services

Admission Program Objective Code: HUSR

Offered at FSCJ, IRSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Insurance

Admission Program Objective Code: INSU
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521701
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Business Management

Admission Program Objective Code: INTN
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, SCFMS, SPC, USF*, USFSP*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Studies, General (UCF)

Admission Program Objective Code: LEGL
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- No specific courses are required

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management and Supervision (BAS - NWF)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(Also see Supervision and Management)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Info Systems - Business/Data Processing/Business Information Mgt

Admission Program Objective Code: MGIN
State CIP Code: 1192401010

Offered at FAU, FGCU, FSU*, SSCF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521201
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and

monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Management Science

Admission Program Objective Code: MGNT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Marketing, Other - Advertising

Admission Program Objective Code: MARO
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521499
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nonprofit Management (UCF)

Admission Program Objective Code: NPRO
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Parks & Recreation Management

Admission Program Objective Code: PRKF
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

AA Transfer Major: Parks & Recreation Management - Hospitality, Recreation & Resort Management

Admission Program Objective Code: PRKH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Parks & Recreation Management - Instruction

Admission Program Objective Code: PKRE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Parks & Recreation Management - Recreation and Tourism

Admission Program Objective Code: PRKT
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AA Transfer Major: Parks & Recreation Management - Recreation, Tourism & Events

Admission Program Objective Code: PRKR
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310301, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

AA Transfer Major: Professional Communication

Admission Program Objective Code: PRCO
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090900
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Project Management (BAS - NWF)

Admission Program Objective Code: PROJ
State CIP Code: 1192401010

Offered at NWFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Relations & Organizational Communication

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 090902
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Restaurant and Food Service Management

Admission Program Objective Code: REST
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520905
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Supply Chain Management (BAS)

Admission Program Objective Code: SUPP
State CIP Code: 1192401010

Offered at BC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520203, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Sustainability Management - BAS

Admission Program Objective Code: SUST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Students with the following Associate in Science (AS) degrees will be admitted: Environmental Science Technology, Architectural Design & Construction Technology, Drafting and Design Technology or Engineering Technology.

Students who do not have one of the AS degrees listed will be required to take 15 credits in related coursework which mirrors coursework for SPC's AS in Environmental Science Technology degree requirements.

- The courses include: ARCXXXX, CHMXXXX, ECO 2013, ECO 2023, EETXXXX, ETM 1010C, ESCXXXX, EVRXXXX, GLYXXXX, GIS 1040C, OCEXXXX, PHYXXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Transportation Management

Admission Program Objective Code: TRAN
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520209
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Major Field of Interest: Education

AA Transfer Major: Agricultural Teacher Education (Vocational)

Admission Program Objective Code: AGTE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral

reporting.

Prerequisite(s): passing score on placement test.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Art Teacher Education

Admission Program Objective Code: ARTT
State CIP Code: 1192401010

Offered at FIU, UCF, UF*, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131302
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.
or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Business Teacher Education/Business Technology Education

Admission Program Objective Code: BTEA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

- XXXXXXX - Elective in Business Administration*
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Drama Education

Admission Program Objective Code: DRAM
State CIP Code: 1192401010

Offered at FAMU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 500501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Education of Blind & Visually Handicapped

Admission Program Objective Code: EDBL
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131009
*See note on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Education, General

Admission Program Objective Code: EDTR
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Educational Studies

Admission Program Objective Code: EDST
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 139999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

NOTE: Completion of this program does not result in educator certification.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Elementary Teacher Education

Admission Program Objective Code: ELED
State CIP Code: 1192401010

Offered at CC, DSC, FAMU, FGCU, FSU*,FSWSC, NWFSC, PSC, SFSC, UCF, UF*, USF, USFSM, USFSP, UWF, FIU, FAU, SPC, IRSC, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131202
*See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: English Teacher Education

Admission Program Objective Code: ENTE
State CIP Code: 1192401010

Offered at CC, FAU, FSU, FSWSC, UCF, USF, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131305
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix
  or
- ENLXXXX - Any course with the ENL prefix

AA Transfer Major: Health Teacher Education (FSU)

Admission Program Objective Code: HTED
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131307
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Social Science Ed

Admission Program Objective Code: MTES
State CIP Code: 1192401010

Offered at UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or

- ENLXXXX - Any course with the ENL prefix
  AND
- AMHXXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade English/Middle Grade Special Ed

Admission Program Objective Code: MTSP
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade English Ed

Admission Program Objective Code: MTEN
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

- AMLXXXX - Any course with the AML prefix
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Science Ed

Admission Program Objective Code: MTMS
State CIP Code: 1192401010

Offered at NWFSC, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab
  or
- METXXXXC - Any course with the MET prefix that includes a lab
  or
- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Math/Middle Grade Social Science Ed

Admission Program Objective Code: MTSS
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 4/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this

course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements

for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade English Ed

Admission Program Objective Code: MTSE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix that includes a lab

or

- METXXXXC - Any course with the MET prefix that includes a lab

or

- OCEXXXXC - Any course with the OCE prefix that includes a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMLXXXX - Any course with the AML prefix*
  or
- LITXXXX - Any course with the LIT prefix
  or
- ENCXXXX - Any course with the ENC prefix
  or
- ENLXXXX - Any course with the ENL prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jr. High/Middle School Teacher Ed - Middle Grade Science/Middle Grade Social Science Ed

Admission Program Objective Code: MTSC
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131203, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- GLYXXXXC - Any course with the GLY prefix and a lab

or

- METXXXXC - Any course with the MET prefix and a lab

or

- OCEXXXXC - Any course with the OCE prefix and a lab

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- AMHXXX - Any course with the AMH prefix
  or
- WOHXXXX - Any course with the WOH prefix
  or
- EUHXXXX - Any course with the EUH prefix
  or
- POSXXXX - Any course with the POS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Jr. High/Middle School Mathematics Ed (NWF)

Admission Program Objective Code: MATN
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- MACXXXX - Any course with the MAC prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics Teacher Education - Secondary Mathematics Education

Admission Program Objective Code: MATR
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FSWSC, IRSC, UNF, USF, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131311, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

- MACXXXX - Any course with the MAC prefix
  or
- MTGXXXX - Any course with the MTG prefix
  or
- MASXXXX - Any course with the MAS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - Mathematics Teacher Education

Admission Program Objective Code: MFIU
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables,

partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Education Teacher Education

Admission Program Objective Code: PHED
State CIP Code: 1192401010

Offered at FIU, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this

course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

or

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

- PELXXXX - 4-5 credit hours of courses with the PEL prefix
- PEMXXXX - 3 hours of courses with the PEM prefix

  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Pre-Elementary/Early Childhood Teacher Ed - Age 3 through Grade 3

Admission Program Objective Code: ECHA
State CIP Code: 1192401010

Offered at CCF, FGC, FGCU, FSCJ, FSU*, MDC, NWFSC, PSC, SCFMS, SFC, SJRSC, UCF, UNF, UWF, SPC, USF, USFSM, FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131210
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Science Teacher Education - Biology Teacher Ed (BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC)

Admission Program Objective Code: SCIB
State CIP Code: 1192401010

Offered at BC, CC, DSC, FSWSC, IRSC, NWFSC, SPC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131322
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically

about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Biology Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEB
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 1/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the

subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Choose any two of the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (DSC, MDC)

Admission Program Objective Code: SCIC
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131323
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals

and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Chemistry Teacher Education (FAMU, FAU, UCF, UNF, USF)

Admission Program Objective Code: STEC
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 2/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Earth/Space Teacher Education

Admission Program Objective Code: STEE
State CIP Code: 1192401010

Offered at DSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 3/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC
- OCEXXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Middle Grades Science Teacher Education (NWF)

Admission Program Objective Code: MSCI
State CIP Code: 1192401010

Offered at BC, CC, FSWSC, IRSC, NWFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 5/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- GLYXXXX OR GLYXXXXC

- OCEXXXX
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Science Teacher Education - Physics Teacher Education

Admission Program Objective Code: STEP
State CIP Code: 1192401010

Offered at FAU, UCF, UNF, USF

Offered at DSC, MDC - CIP code 131329

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131316, track 4/5
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus,

area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - English

Admission Program Objective Code: SETE
State CIP Code: 1192401010

Offered at UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- LITXXXX - Any course with the LIT prefix
  or
- AMLXXXX - Any course with the AML prefix

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course

may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

or

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Ed - Social Science

Admission Program Objective Code: SESS
State CIP Code: 1192401010

Offered at FAMU, UCF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 2/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Biology Teacher Education (Track 4/6) (UCF)

Admission Program Objective Code: BTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

Select one course from the following:

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Select one course from the following:

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.
or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Chemistry Teacher Education (Track 5/6) (UCF)

Admission Program Objective Code: CTED
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

Select from the following groups of courses:

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

and

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Physics Teacher Education (Track 6/6) (UCF)

Admission Program Objective Code: PHYE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 6/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Secondary Teacher Education - Secondary Mathematics Teacher Education (Track 3/6) (UCF)

Admission Program Objective Code: SMTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131205, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

Select one course from the following:
MAC XXXX
or MTG XXXX
or MAS XXXX

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences Teacher Ed (History, Social Science, Economics, and Political Science)

Admission Program Objective Code: SSTE
State CIP Code: 1192401010

Offered at FAMU, FAU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131317
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ECOXXXX - Any course with the ECO prefix
  or
- SOCXXXX - Any course with the SOC prefix
  or
- ANTXXXX - Any course with the ANT prefix
  or
- PSYXXXX - Any course with the PSY prefix
  or
- GEAXXXX - Any course with the GEA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Special Education, General

Admission Program Objective Code: SPED
State CIP Code: 1192401010

Offered at BC, CC, DSC, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF, SPC, IRSC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Supervision & Management (BAS), Organizational Mgt (BAS), Business & Org Mgt (BAS), Administration & Supervision (BAS), Spvr & Org Mgt (BAS) Mgt & Org Leadership (BAS)

Admission Program Objective Code: SVMG
State CIP Code: 1192401010

Offered at BCC, BC, CC, CCF, DSC, FSWFC, FSCJ, GCSC, IRSC, LSSC, MDC, NWFSC, PBSC, PESC, PSC, SFC,SFSC, SJRSC, SPC
(CIP 520299 is Management and Supervision at NWFSC)

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520299
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Teacher Education, Multiple Levels (Track 1/3) (USFSP)

Admission Program Objective Code: TCHE
State CIP Code: 1192401010

Offered at USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Teacher Education, Multiple Levels - Art Education (Track 2/3) (UCF)

Admission Program Objective Code: ARTE
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131206, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

Select one course from the following:

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

or

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Trade & Industrial Teacher Ed (Vocational)

Admission Program Objective Code: TRAD
State CIP Code: 1192401010

Offered at FIU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 131320
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

- 15 hours in courses from the area of specialization*

* See Notes on Common Course Prerequisite Manual

AA Major Field of Interest: Health Sciences

AA Transfer Major: Athletic Training

Admission Program Objective Code: ATHL
State CIP Code: 1192401010

Offered at FGCU*, FSU*, UCF, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510913
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Behavioral Healthcare

Admission Program Objective Code: BEHA
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Cardiopulmonary Science

Admission Program Objective Code: CARD
State CIP Code: 1192401010

Offered at FSWSC, VC*, FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510908
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

- CGSX060 (required at FAMU only)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health

Admission Program Objective Code: COMH
State CIP Code: 1192401010

Offered at FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512208
* See Notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Community Health Liaison

Admission Program Objective Code: CMHL
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

- STAXXXX - Any course with the STA prefix

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

AA Transfer Major: Dental Hygiene (BAS)

Admission Program Objective Code: DEHY
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510602
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Dietetics/Nutritional Services

Admission Program Objective Code: DIET
State CIP Code: 1192401010

Offered at FIU*, FSU, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Dietetics/Nutritional Services - Dietetics

Admission Program Objective Code: DIEN
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required.

The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FAU, UNF)

Admission Program Objective Code: EXFA
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (FGCU only)

Admission Program Objective Code: EXFG
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310505, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Exercise Science (USF only)

Admission Program Objective Code: EXUS
State CIP Code: 1192401010

Offered at USF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 131314, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear,

quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Health and Physical Education, General - Exercise Science

Admission Program Objective Code: HPEE
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course

Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

or

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health and Physical Education, General - Health, Leisure, and Fitness Studies

Admission Program Objective Code: HPEH
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Health and Physical Education, General - Physical Education

Admission Program Objective Code: HPEP
State CIP Code: 1192401010

Offered at FAMU, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310501, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Education Required Courses

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

** See Notes on Common Course Prerequisite Manual, link above

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- 4 Credit hours in Skill Development Courses in Physical Activities
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Information Management

Admission Program Objective Code: HEIM
State CIP Code: 1192401010

Offered at FAMU, UCF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510706
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- CGSXXXX - Any course with the CGS prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science (Track 5/7) (SSCF, FGCU)

Admission Program Objective Code: HESC
State CIP Code: 1192401010

Offered at FGCU, SSCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 5/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Community Health (Track 6/7) (UNF)

Admission Program Objective Code: HUNF
State CIP Code: 1192401010

Offered at UNF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 6/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- STAXXXX - Any course with the STA prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Concentration in Physician Assistant Studies (Track 2/7) (MDC)

Admission Program Objective Code: HMDC
State CIP Code: 1192401010

Offered at MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 2/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Pre-Clinical/Pre-Physical Therapy (Track 3/7) (FAMU, UCF)

Admission Program Objective Code: HSPC
State CIP Code: 1192401010

Offered at FAMU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, track 3/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Services Administration

Admission Program Objective Code: HLSR
State CIP Code: 1192401010

Offered at SFC, FAMU, FAU, FGCU, FIU, IRSC, SCFMS, UCF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the

economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Health Services Administration (BAS)

Admission Program Objective Code: HSAD
State CIP Code: 1192401010

Offered at EFSC, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512211
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Nursing (Track 1/2)

Admission Program Objective Code: NRSN
State CIP Code: 1192401010

Offered at FAMU*, FAU*, FGCU*, FIU*, FSU*, UCF*, UF*, UNF*, USF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, Track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Nursing - AS to BS (NWF)

Admission Program Objective Code: NUR1
State CIP Code: 1192401010

Offered at BC, CC, CCF, DSC*, FAMU*, FAU*, FSCJ, FSWSC, GCSC, NWFSC, PBSC, PESC, PHSC, PSC, SCFMS, SFC, SFSC, IRSC, SPC, SJRSC, TCC, FGCU*, FIU*, FSU*, FGC, MDC, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 513801, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

- BSCXXXX - Any course with the BSC prefix
  or
- CHMXXXX - Any course with the CHM prefix
  or
- PHYXXXX - Any course with the PHY prefix

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

- SYGXXXX - Any course with the SYG prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Health (FGCU, USF)

Admission Program Objective Code: PUBH
State CIP Code: 1192401010

Offered at FGCU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences,

correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Sport Management

Admission Program Objective Code: SPME
State CIP Code: 1192401010

Offered at FSU, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 310504
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- MARXXXX - Any course with the MAR prefix
  or
- GEBXXXX - Any course with the GEB prefix

- MANXXXX - Any course with the MAN prefix
  or
- BULXXXX - Any course with the BUL prefix
  or

- CGSXXXX - Any course with the CGS prefix
  or
- STA 2023 - Statistics **4 Credit Hours**
  or
- ACGXXXX - Any course with the ACG prefix

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

or

- ECOXXXX - Any course with the ECO prefix (ECO 2013 or ECO 2023)

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science (Track 1/7) (FAU, UF*, USF, USFSP, UWF)

Admission Program Objective Code: HSCI
State CIP Code: 1192401010

Offered at FAU, UF*, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 1/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select one course from the following:

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

or

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.
* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Health Science - Interdisciplinary Medical Science (Track 7/7) (FSU)

Admission Program Objective Code: MESI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510000, Track 7/7
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

Select from the following:

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and

incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.
* See Notes on Common Course Prerequisite Manual

AA Major Field of Interest: Industry/Manufacturing & Construction

AA Transfer Major: Architecture - FAMU/NWF Pre-Articulation Agreement

Admission Program Objective Code FAMU
State CIP Code 1192401010

Articulation Agreement with the Florida A&M University (FAMU) School of Architecture:

An articulation agreement between NWF State College and Florida A&M University (FAMU) School of Architecture allows students to earn an Associate in Arts (A.A.) degree that could qualify them for entrance to the upper-division of the Bachelor of Science in Architectural Studies degree program at FAMU. It is highly recommended that, in addition to the common prerequisites listed below, students should consult the current catalog from FAMU. Some SUS programs have restricted access or are considered Limited Access programs. Students are responsible for completing the specific requirements for admissions. For more information on the FAMU A.A. to B.S. articulation, contact Mr. Ray Rickman at 729-5218 or rickmanr@nwfsc.edu.

Associate in Arts Degree/Pre-Architecture FAMU Prerequisites

Please consult the Course Description section of the catalog for the required prerequisites of all courses needed to satisfy the requirements of this program. Students must meet NWFSC A.A. degree graduation requirements.

General Education

Undesignated courses are to be selected from the General Education Requirements listed in the AA Degree General Education Requirements section of catalog for specific courses.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general

education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and

monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

Total General Education Credits Required: 36

Program Electives

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University;

students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

Total Program Elective Credits Required: 36

Total Articulation Program Credits Required: 72

AA Transfer Major: Construction Engineering

Admission Program Objective Code: CONS
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140803
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric

substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Surveying

Admission Program Objective Code: SURV
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 151102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-

chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Sustainability and Built Environment

Admission Program Objective Code: SSBL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Major Field of Interest: Public Safety

AA Transfer Major: Criminal Justice Studies

Admission Program Objective Code: CRIM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, PSC, UCF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 430104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Criminology

Admission Program Objective Code: CRMO
State CIP Code: 1192401010

Offered at UF*, USF, USFSM, USFSP

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Fire and Emergency Services

Admission Program Objective Code: FRES
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430203
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Fire Science Management (BAS)

Admission Program Objective Code: FIR1
State CIP Code: 1192401010

Offered at FSCJ
Transfer Program CIP code: 430202

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety and Security

Admission Program Objective Code: PUBC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430107
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Public Safety Mgt (BAS) or Public Admin (BAS) or Public Safety/Homeland Security

Admission Program Objective Code: PBHL
State CIP Code: 1192401010

Offered at FAU, FSCJ, FSWSC, MDC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 439999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Major Field of Interest: STEM (Science, Technology, Engineering & Math)

AA Transfer Major: Actuarial Science

Admission Program Objective Code: ACTU
State CIP Code: 1192401010

Offered at FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521304
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Aerospace Engineering

Admission Program Objective Code: AERO
State CIP Code: 1192401010

Offered at UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Agricultural Engineering

Admission Program Objective Code: AGRE
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems,

mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Agriculture Science

Admission Program Objective Code: AGRS
State CIP Code: 1192401010

Offered at UFAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 010000
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Applied Physiology and Kinesiology

Admission Program Objective Code: APPK
State CIP Code: 1192401010

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Offered at FSU, UF
Transfer Program CIP code: 260908
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals

and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Applied Science

Admission Program Objective Code: APPL
State CIP Code: 1192401010

Offered at FGCU, UCF, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Majors Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Astronomy

Admission Program Objective Code: ASTR
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Biochemistry

Admission Program Objective Code: BICY
State CIP Code: 1192401010

Offered at FGCU, FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260202
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure,

evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

or

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

or

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum

grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences - Interdisciplinary Natural Sciences

Admission Program Objective Code: BIOP
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 16/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Chemistry

Admission Program Objective Code: BICH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 1/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Computer Science

Admission Program Objective Code: BICO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 2/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health

profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Earth Science

Admission Program Objective Code: BIEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 3/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Mathematics

Admission Program Objective Code: BIMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 4/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Biology & Physics

Admission Program Objective Code: BIPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 5/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Computer Science

Admission Program Objective Code: CHCO
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 6/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic

graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Earth Science

Admission Program Objective Code: CHEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 7/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Program Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus,

area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Mathematics

Admission Program Objective Code: CHMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 8/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Chemistry & Physics

Admission Program Objective Code: CHPY
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 9/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite

sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer & Earth Sciences

Admission Program Objective Code: CMEA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 10/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Math

Admission Program Objective Code: CMMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 11/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables,

partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Computer Science & Physics

Admission Program Objective Code: CMPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 12/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Mathematics

Admission Program Objective Code: EAMA
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 13/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory

technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Earth Science & Physics

Admission Program Objective Code: EAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 300101, track 14/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological & Physical Sciences Interdisciplinary Studies - Mathematics & Physics

Admission Program Objective Code: MAPH
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 300101, track 15/16
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biological/Biosystems Engineering

Admission Program Objective Code: BIBI
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 144501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Biology, General

Admission Program Objective Code: BIOL
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, IRSC, MDC, SPC, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular

growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biology, General - FSU - Teach

Admission Program Objective Code: BIOF
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.
or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biomedical Sciences

Admission Program Objective Code: BIMD
State CIP Code: 1192401010

Offered at FSCJ, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Biomedical/Bioengineering

Admission Program Objective Code: BIEN
State CIP Code: 1192401010

Offered at FIU, FGCU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Biotechnology

Admission Program Objective Code: BITC
State CIP Code: 1192401010

Offered at FGSU, SFC, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Botany, General

Admission Program Objective Code: BOTA
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.
and

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Transfer Major: Chemical Engineering

Admission Program Objective Code: CHEN
State CIP Code: 1192401010

Offered at FIU, FAMU, FSU, USF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Chemical Sciences - Chemical Sciences

Admission Program Objective Code: CMSI
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

AA Transfer Major: Chemical Sciences - FSU Teach

Admission Program Objective Code: CMST
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400599, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Chemistry

Admission Program Objective Code: CHEM
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to

have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Chemistry Teacher Education

Admission Program Objective Code: CHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400501, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

Transfer Major Physical Sciences Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

**Required for Bachelor in Science degree.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

*** May be used for Bachelor in Arts degree only.

* See Notes on Common Course Prerequisite Manual, link above.

AA Transfer Major: Civil Engineering

Admission Program Objective Code: CIVI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UNF, FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and

planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Computational Biology

Admission Program Objective Code: BICP
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261104
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

Transfer Major Physical Sciences Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computational Science

Admission Program Objective Code: CMPT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 303001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

- BSCXXXXC - Any lab course with the BSC prefix
  or
- CHMXXXXC - Any lab course with the CHM prefix
  or

- GLYXXXXC - Any lab course with the GLY prefix
  or
- METXXXXC - Any lab course with the MET prefix
  or
- PHYXXXXC - Any lab course with the PHY prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science

Admission Program Objective Code: CMIN
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 1/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- Choose two science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)
  *See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Computer Science (FSU only)

Admission Program Objective Code: CFSU
State CIP Code: 1192401010

Offered at FSU*
Transfer Program CIP code: 110101, track 2/6

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Science (UNF only)

Admission Program Objective Code: CUNF
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 4/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science - Information Technology

Admission Program Objective Code: CIIT
State CIP Code: 1192401010

Offered at UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 5/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- An introductory object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SPCXXXX - Any course with the SPC prefix

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer & Information Science- Information Systems

Admission Program Objective Code: CIS
State CIP Code: 1192401010

Offered at FAMU, UF, UNF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 3/6
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - High level programming language course*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

or

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Criminology

Admission Program Objective Code: CMCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430116
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- COP2XXX - Any computer programming course*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

AA Transfer Major: Computer Engineering - Computer & Information Engineering

Admission Program Objective Code: CMPE
State CIP Code: 1192401010

Offered at FAMU, FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 2/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in Ada, C, C++, Pascal or equivalent language* (COP 2010, COP 2030, COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Engineering - Computer Engineering

Admission Program Objective Code: CMEN
State CIP Code: 1192401010

Offered at FAMU, UF, FAU, FIU, FSU, UCF, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 140901, track 1/3
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Networking (BAS)

Admission Program Objective Code: CNET
State CIP Code: 1192401010

Offered at FSCJ

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110901
*See notes in Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Computer Science - BA in Computer Science (Track 6/6) (FSU)

Admission Program Objective Code: CMSC
State CIP Code: 1192401010

Offered at FSU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110101, track 6/6
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Computer Software & Media Applications

Admission Program Objective Code: CSFM
State CIP Code: 1192401010

Offered at FGCU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)
- A science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Electrical, Electronics Engineering

Admission Program Objective Code: ELEL
State CIP Code: 1192401010

Offered at UF, FAMU, FAU, FSU, UCF, UNF, USF, FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141001, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Electronic Engineering Technology - Electrical & Computer Engineering Technology

Admission Program Objective Code: ELEC
State CIP Code: 1192401010

Offered at FAMU, VC, MDC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150303
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Energy Technology Management (BAS)

Admission Program Objective Code: ENRG
State CIP Code: 1192401010

Offered at SCFMS

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 150503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Engineering Technology

Admission Program Objective Code: ENGN
State CIP Code: 1192401010

Offered at DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 159999
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

AA Transfer Major: Entomology

Admission Program Objective Code: ENTM
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260702
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Environmental Health Engineering

Admission Program Objective Code: ENVR
State CIP Code: 1192401010

Offered at FIU, FGCU, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Environmental Science

Admission Program Objective Code: ENVS
State CIP Code: 1192401010

Offered at FSU (BA only), UF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030104, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med,

and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.
or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

or

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Environmental Science - Geography/Environmental Management

Admission Program Objective Code: ENVG
State CIP Code: 1192401010

Offered at UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 130104, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Dietetics

Admission Program Objective Code: FSTD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 2/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Food Science & Technology - Food Science

Admission Program Objective Code: FOOD
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 011001, track 1/2
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual, link above

AA Transfer Major: Forensic Science

Admission Program Objective Code: FORE
State CIP Code: 1192401010

Offered at FGCU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 430106
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry,

coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Forest Resources & Conservation - Wildlife Ecology & Conservation

Admission Program Objective Code: FORW
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 030501, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals

and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology

Admission Program Objective Code: GEOT
State CIP Code: 1192401010

Offered at FAU, FIU, FSU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400601, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general

chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth’s interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geology - Earth Science Teacher Education

Admission Program Objective Code: GEEA
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400601
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock,

and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Geomatics Engineering

Admission Program Objective Code: GEOE
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used

to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body

dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Geoscience - FSU Teach

Admission Program Objective Code: GEOS
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141401, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Gerontology

Admission Program Objective Code: GERO
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 301101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Industrial & Systems Engineering

Admission Program Objective Code: INSY
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Industrial/Manufacturing Engineering

Admission Program Objective Code: INDS
State CIP Code: 1192401010

Offered at FAMU, FSU, UCF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 143501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Information Sciences and Studies - Computer Information Systems EN EIF

Admission Program Objective Code: INSC
State CIP Code: 1192401010

Offered at EFSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110401
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - Introductory programming in C, C++, Java or equivalent language. * (COP 2010, COP 2030 , COP 2176, COP 2220, COP 2224, COP 2360, COP 2654, COP 2660, COP 2700, COP 2702, COP 2800)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (BC, FAMU, FIU, FSU, USF, UWF)

Admission Program Objective Code: INTB
State CIP Code: 1192401010

Offered at BC, FAMU, FIU, FSU, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 2/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)*
- COPXXXX - Any computer programming course*
- COPXXXX - COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
- MACXXXX Pre-Calculus course or Discrete Math
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Information Technology (UCF, USFSM, DSC)

Admission Program Objective Code: INTA
State CIP Code: 1192401010

Offered at UCF, USF, USFSM, DSC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 110103, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- PSYXXXX - Any course with the PSY prefix

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

- CGSXXXX - Any database course* (CGS 2541 ,CGS 2544)
- COP2XXX - Any computer programming course*
- PHYXXXX - Any course with the PHY prefix
- COPXXXX - Any object-oriented computer programming course* (COP 2224, COP 2228, COP 2360, COP 2362, COP 2654, COP 2658, COP 2660, COP 2662, COP 2800, COP 2805, COP 2833)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Interdisciplinary Studies

Admission Program Objective Code: INTE
State CIP Code: 1192401010

Offered at UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 309999
*See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate

placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Marine/Aquatic Biology

Admission Program Objective Code: MARI
State CIP Code: 1192401010

Offered at FIU, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 261302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business

applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Materials Engineering

Admission Program Objective Code: MATE
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141801
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Mathematics General - Mathematics General

Admission Program Objective Code: MATH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (Please check with your transfer institution for the appropriate course)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mathematics, General - FSU - Teach

Admission Program Objective Code: MFSU
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270101, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- A laboratory based science course for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Mechanical Engineering

Admission Program Objective Code: MECH
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FPU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Medical Technology/Clinical Laboratory Sciences

Admission Program Objective Code: MEDC
State CIP Code: 1192401010

Offered at USF, SFC, FGCU, UCF*, UWF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 511005
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Meteorology - Meteorology

Admission Program Objective Code: METE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400401, track 1/2
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of

differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Microbiology/Bacteriology

Admission Program Objective Code: MCBA
State CIP Code: 1192401010

Offered at UCF, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260503
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

or

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Nuclear Engineering

Admission Program Objective Code: NUCL
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 142301
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current

circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Pharmaceutical Science

Admission Program Objective Code: PHAR
State CIP Code: 1192401010

Offered at FAMU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-

Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and

aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of

differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Pharmacy (Pharm D)

Admission Program Objective Code: PHAD
State CIP Code: 1192401010

Offered at FAMU*, UF*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512001
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.
or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Photonics Science and Engineering

Admission Program Objective Code: PHEN
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 141003
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current

circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physical Science

Admission Program Objective Code: PHSC
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physical Science - FSU Teach

Admission Program Objective Code: PHYT
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400899, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of "C" or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

- SMTX043 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*
- SMTX053 - Not offered at NWFSC but can be taken at transfer institution when admitted to upper division.*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Physics

Admission Program Objective Code: PHYS
State CIP Code: 1192401010

Offered at FAMU, FAU, FIU, FSU, UCF, UF, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Physics Teacher Education

Admission Program Objective Code: PHTE
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 400801, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

AA Transfer Major: Psychobiology

Admission Program Objective Code: PSYB
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422706
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.
or

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.
or

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AA Transfer Major: Radiologic and Imaging Science

Admission Program Objective Code: RDTC
State CIP Code: 1192401010

Offered at VC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

> *To be admitted, a student must have current American Registry of Radiologic Technologists (ARRT) certification.**
>
> * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Speech Pathology & Audiology (FSU, UCF, UF, USF)

Admission Program Objective Code: SPCP
State CIP Code: 1192401010

Offered at FSU*, UCF, UF*, USF, USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 1/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics

include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course with the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology (USFSM)

Admission Program Objective Code: SPCU
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is

recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- BSCXXXX - Any course with the BSC prefix

- PHYXXXX - Any course with the PHY prefix
  or
- CHMXXXX - Any course with the CHM prefix

- PSYXXXX - Any course with the PSY prefix
  or
- CLPXXXX - Any course the the CLP prefix
  or
- DEPXXXX - Any course with the DEP prefix
  or
- SYGXXXX - Any course with the SYG prefix

AA Transfer Major: Speech Pathology & Audiology - Deaf Studies Concentration

Admission Program Objective Code: SPCH
State CIP Code: 1192401010

Offered at USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510204, track 3/3
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Statistics

Admission Program Objective Code: STAT
State CIP Code: 1192401010

Offered at FIU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 270501
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- COPXXXX - A scientific programming course designed for computer science majors* (COP 2011, COP 2222, COP 2228, COP 2362, COP 2658 , COP 2662, COP 2805, COP 2833, COP 2840)

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

- Two laboratory based science courses for science majors* (BSC 1010C, BSC 1011C, CHM 1045C, CHM 1046C, GLY 2010C, GLY 2100C, PHY 2048C, PHY 2049C)

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Technology Management (BAS)

Admission Program Objective Code: TCMG
State CIP Code: 1192401010

Offered at BC, FSCJ, GCSC, PBSC, SCFMS, SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 111099
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

Admission into this BAS program requires an AS degree from a regionally-accredited institution in Computer Engineering Technology, Computer Information Technology, Computer Programming or Database Technology. Students with an AA degree, 60 credit hours but no degree, or an AS degree in another area may be admitted by the Dean on a case-by-case basis.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Veterinary Technology (BAS)

Admission Program Objective Code: VET
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 510808
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Zoology

Admission Program Objective Code: ZOO
State CIP Code: 1192401010

Offered at UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 260701
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

AA Major Field of Interest: Social & Behavioral Sciences & Human Services

AA Transfer Major: African-American (Black) Studies

Admission Program Objective Code: AFRI
State CIP Code: 1192401010

Offered at FAMU, FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: American Studies (USA)

Admission Program Objective Code: AMER
State CIP Code: 1192401010

Offered at FSU, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050102
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

No required courses for this Transfer Major.

AA Transfer Major: Anthropology

Admission Program Objective Code: ANTH
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, UF, UNF, USF, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450201
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Classes

- ANTXXXX - Any course with ANT prefix
- ANTXXXX - Any course with ANT prefix

AA Transfer Major: Asian Studies

Admission Program Objective Code: ASIA
State CIP Code: 1192401010

Offered at FIU, FSU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FAU, FSU, UWF)

Admission Program Objective Code: HAMB
State CIP Code: 1192401010

Offered at FAU, FSU*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 2/4
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher
or

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum

grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (FIU)

Admission Program Objective Code: HAMD
State CIP Code: 1192401010

Offered at FIU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 4/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (Track 1/4) (FIU, FSU, UCF)

Admission Program Objective Code: HAMA
State CIP Code: 1192401010

Offered at FIU, FSU, UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 1/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Hospitality Administration/Management (USFSM)

Admission Program Objective Code: HAMC
State CIP Code: 1192401010

Offered at USFSM

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520901, track 3/4
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Humanities

Admission Program Objective Code: HUMA
State CIP Code: 1192401010

Offered at FSU, UCF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 240103
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International /Global Studies

Admission Program Objective Code: INTG
State CIP Code: 1192401010

Offered at UCF, UF, UNF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 302001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: International Relations

Admission Program Objective Code: INTR
State CIP Code: 1192401010

Offered at FIU, FSU, UNF, USF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450901
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Jewish Studies

Admission Program Objective Code: JWST
State CIP Code: 1192401010

Offered at FAU, FU
Transfer Program CIP code: 380206
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Legal Assisting

Admission Program Objective Code: LEGA
State CIP Code: 1192401010

Offered at UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Linguistics

Admission Program Objective Code: LING
State CIP Code: 1192401010

Offered at FAU, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 160102
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- XXXXXXX - Demonstrated competency by testing or completion of a foriegn language through the intermediate level (SPN 2220 - Spanish III or ASL 2160 - American Sign Language III at NWFSC)*

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Middle Eastern Studies

Admission Program Objective Code: MIDE
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 050108
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Paralegal Studies (BAS)

Admission Program Objective Code: PLAA
State CIP Code: 1192401010

Offered at SPC

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 220302, 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Political Science & Government

Admission Program Objective Code: POTL
State CIP Code: 1192401010

Offered at FAU, UCF, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451001
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Psychology, General

Admission Program Objective Code: PSCH
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF, UF*, UNF, USF, USFSM, USFSP, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 420101
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- One of the following Biology courses: BSC 1005, BSC 1010C, BSC 1011C, BSC 1080, BSC 1085C, BSC 1086C, BSC 2020C
  or

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- One of the following Psychology courses: CLP 1001, CLP 2140, DEP 2004, DEP 2100

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Real Estate

Admission Program Objective Code: REAL
State CIP Code: 1192401010

Offered at FAU, FIU, FSU*, UCF, UF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 521501
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Resort & Hospitality Management

Admission Program Objective Code: RSHO
State CIP Code: 1192401010

Offered at FGCU*

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520906
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Psychology

Admission Program Objective Code: SOPS
State CIP Code: 1192401010

Offered at FAU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 422707
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Sciences, General

Admission Program Objective Code: SOSI
State CIP Code: 1192401010

Offered at FAU, FSU, UCF, USF, USFSM, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 450101
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

- Choose any two AA General Education Social Science courses

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Social Work, General

Admission Program Objective Code: SOWR
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FIU, FSU*, UCF*, USF*, UWF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 440701
* See notes on Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AA Transfer Major: Sociology

Admission Program Objective Code: SOCI
State CIP Code: 1192401010

Offered at FAMU, FAU, FGCU, FSU, UCF, UF, UNF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 2/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

- Two Sociology courses - Choose from: SYG 2000, SYG 2010, SYG 2430

AA Transfer Major: Sociology - Anthropology

Admission Program Objective Code: SOAN
State CIP Code: 1192401010

Offered at FUI

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 451101, track 1/2
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

* See Notes on Common Course Prerequisite Manual

AA Transfer Major: Tourism and Travel Services Management

Admission Program Objective Code: TOUR
State CIP Code: 1192401010

Offered at UCF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 520907
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

AA Transfer Major: Vocational Rehabilitation Counseling

Admission Program Objective Code: VOCR
State CIP Code: 1192401010

Offered at FSU

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer institution to confirm program requirements.

Transfer Program CIP code: 512310
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

- SYGXXXX - Any course with the SYG prefix
  * See Notes on Common Course Prerequisite Manual

AA Transfer Major: Women's Studies

Admission Program Objective Code: WOMN
State CIP Code: 1192401010

Offered at FIU, UF, USF

Individual course requirements at specific institutions may sometimes differ from the published Common Course Prerequisite Manual. NWFSC recommends students see an academic advisor as well as contact their transfer

institution to confirm program requirements.

Transfer Program CIP code: 050207
Common Course Prerequisite Manual

The following courses are required for admission into the University Transfer Program. Please see the AA - Associate in Arts General Degree as well as the AA Degree General Education Requirements pages for complete AA degree requirements.

Transfer Major Required Courses*

No required courses for this Transfer Major.

* See Notes on Common Course Prerequisite Manual

Adult Education Courses

Adult Education Courses

ABX 01__ - Adult Basic Education - Mathematics

The Adult Basic Education (ABE) Mathematics course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ABX 02__ - Adult Basic Education - Reading

The Adult Basic Education (ABE) Reading course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ABX 03__ - Adult Basic Education - Language Arts

The Adult Basic Education (ABE) Language Arts course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

XEL 01___ - ESOL I

This course provides small group and individualized instruction in both oral and written English communication skills at the beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 02___ - ESOL II

This course provides small group and individualized instruction in both oral and written English communication skills at the low beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 03___ - ESOL III

This course provides small group and individualized instruction in both oral and written English communication skills at the high beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 04___ - ESOL IV

This course provides small group and individualized instruction in both oral and written English communication skills at the low intermediate level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 05___ - ESOL V

This course provides small group and individualized instruction in both oral and written English communication skills at the high intermediate level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 06___ - ESOL VI

This course provides small group and individualized instruction in both oral and written English communication skills at the advanced level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XGE 14__ - GED 2014 Comprehensive

The GED 2014 Comprehensive Preparation Program provides skills and knowledge building for each of the four content-area assessments of the Official GED 2014 Tests: Reasoning through Language Arts, Mathematics Reasoning, Science, and Social Studies. The purpose of the program is to prepare students to obtain the knowledge and skills necessary to pass the Official GED Tests and be awarded a State of Florida High School Diploma. An additional performance level will certify that the adult student is career and college ready. This program strives to motivate students not only to obtain a GED diploma, but to continue their education to earn a postsecondary degree, certificate, or industry certification.

*Course number varies with number of instructional contact hours.

All Courses Listed Alphabetically

ABX 01__ - Adult Basic Education - Mathematics

The Adult Basic Education (ABE) Mathematics course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ABX 02__ - Adult Basic Education - Reading

The Adult Basic Education (ABE) Reading course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ABX 03__ - Adult Basic Education - Language Arts

The Adult Basic Education (ABE) Language Arts course is a non-credit course designed to develop literacy skills necessary to be successful workers, citizens and family members. Career and College Readiness (CCR) standards have been incorporated into this class. A student enrolled in the ABE program should be enrolled in all of the following courses: Mathematics, Language Arts, and Reading. ABE prepares students to enroll in a GED® Preparation course.

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2021 - Financial Accounting

3 Credit Hours
(Summer)

This course is an introduction to financial accounting that specializes in the processes and principles used to prepare financial statements. This course will focus on the purpose and content of the four basic financial statements including the preparation of these statements as well as interpreting information for decision-making.

Prerequisite(s): MAC 1105 - College Algebra **3 Credit Hours ♦**, equivalent, or higher

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2010 - American Literature I

3 Credit Hours ¶
(Fall)

A course in American Literature from the pre-Colonial period to the Civil War. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2020 - American Literature II

3 Credit Hours ¶
(Spring)

A course in American Literature from Civil War to present. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: AML 2010 is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ANT 2100 - Introduction to Archaeology

3 Credit Hours ❖
(Offered as needed)

Introduction to the fundamental principles, methods, and theories in archaeology. Includes a history of the development of archaeology, and examination of the nature of archaeological data and research, an introduction to archaeological data and analysis, and an examination of approaches to synthesis and interpretation. North and South American archeology is studied, but non-western examples are also studied to enhance an understanding of the development of the discipline in Europe and the Americas.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ANT 2159C - Florida Southeast US Archaeology

3 Credit Hours
(Offered as needed)

Introduction to special topics in anthropology and archaeology. Example: field experience in archaeology, brief introduction to prehistoric native American cultures in Florida and the southeastern United States and field experience excavating a prehistoric site in Okaloosa County.

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2701 - Survey of History of Architecture, Part I

3 Credit Hours
(Offered as needed)

A critical exploration of the history and theory of architecture from pre-history through the end of the 13th century. Examination of the making and intent of significant buildings and sites tracing the developments that have given meaning to the built environment and brought order to the tectonics of architecture. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2060 - Architecture History

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in architecture from prehistoric to modern times. Architecture will be considered in terms of stylistic qualities, structural type, and intended usage. Topics will be addressed according to historical content, societal background, and geographical location. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2930 - Art History – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of

design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 1750C - Pottery I

3 Credit Hours
(Fall, Spring, Summer)

The students shall be exposed to the production of pottery utilizing all known hand building techniques. Also includes introduction to potter's wheel and basic wheel fundamentals. The first half of course is hand building, the second half is devoted to development of skills on the potter's wheel. Students also learn how to glaze pottery and make glass. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1751C - Pottery II

3 Credit Hours
(Fall, Spring, Summer)

Continues hand building of Pottery I, but major emphasis is placed upon development skills utilizing the potter's wheel. Additional glazing experimentation is also emphasized.

Prerequisite(s): ART 1750C. Please refer to catalog section regarding audit enrollment.

ART 1905A - Independent Study – Art

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule. Departmental approval is

required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2331C - Figure Drawing II

3 Credit Hours
(Fall, Spring)

This class is a continuation of Figure Drawing I. Emphasis is on composition and self-expression in relation to the human figure. Exploration of media and content will be encouraged.

Prerequisite(s): ART 2330C. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2500C - Painting I

3 Credit Hours
(Fall, Spring)

Course will include design elements, composition and spatial relationships. Emphasis is on color theory, color mixing, and execution thereof within a variety of subject matter. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2501C - Painting II

3 Credit Hours
(Fall, Spring)

This course is a continuation of Painting I ART 2500C with emphasis on further exploration of student’s personal style and original techniques. Further experimentation in abstraction and emotional aspects of form and color are explored and expressed.

Prerequisite(s): ART 2500C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2540C - Water Color I

3 Credit Hours
(Fall, Spring)

An introduction to water media techniques applied to various subject matter through demonstrations and various lab experiences. Open to all students. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2541C - Water Color II

3 Credit Hours
(Fall, Spring)

Allows continued experience in more complex water color technique and subject matter. Emphasis is on composition and individual expression.

Prerequisite(s): ART 2540C. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

ART 2701C - Sculpture I

3 Credit Hours
(Spring)

An introductory course in the technical and aesthetic consideration of sculptural forms. Includes a wide range of materials and expressions, representing past and present sculptural methods. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2703C - Sculpture II

3 Credit Hours
(Spring)

Allows continued experience in more complex three-dimensional techniques; emphasis on individual projects and conceptual approach.

Prerequisite(s): ART 2701C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2834C - Gallery Practices

3 Credit Hours
(Offered as needed)

The principles of Art Gallery practices and operations. Both theoretical and practical experiences will be obtained through lectures, field trips and class projects.

ART 2930 - Art - Special Topics

3 Credit Hours
(Fall, Spring Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

ART 2955 - Portfolio Development

3 Credit Hours
(Spring)

Development of a working portfolio through studio project aimed at fulfilling the general requirements the average company, university, art school or advertising agency looks for in a portfolio presentation.

Prerequisite(s): ART 1201C, ART 1203C, ART 1300C, ART 1301C.

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ASL 1150 - American Sign Language II

4 Credit Hours
(Fall, Spring)

This course increases the student's American Sign Language vocabulary and uses more complex expression of thoughts, ideas, and emotions and increases the receptive and expressive proficiency of the student in both sign and finger spelling.

Prerequisite(s): ASL 1140 or an equivalent course with a grade of "C" or better

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ASL 2160 - American Sign Language III

4 Credit Hours
(Summer)

A conversational course in American Sign Language utilizing skills and vocabulary from American Sign Language I and II and building on these to form more complex expressions in American Sign Language. Impromptu and planned stories, dialogues and skits will be performed. Receptive and expressive finger spelling will be advanced. No voice will be used for the majority of classroom time.

Prerequisite(s): ASL 1150 or an equivalent course with a grade of "C" or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AST 1005 - Introduction to Astrobiology

3 Credit Hours
(Spring)

This course will explore the scientific evidence for the possibility, probability, and potential nature of life that might exist beyond the Earth. Contemporary discoveries about current and past conditions suitable for the origin of life on Mars and some of the moons orbiting other planets in our own solar system are reviewed in the context of what we understand about life on Earth. The question of life in other solar systems is also covered. Space travel and problems regarding intelligent extra-terrestrial beings visiting the Earth and intelligent life beyond the Earth but still within our own solar system are also discussed. All this is done in a fashion which integrates the various branches of science required to understand life beyond the Earth: Astronomy, Biology, Chemistry, Geology, and Physics. There are no prerequisites for this course and it may be taught in a team fashion by faculty members from various scientific disciplines.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

BCN 1520 - Electrical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with electrical terminology, practices, methods, code requirements and safety and health in construction.

BCN 1567 - Plumbing and Gas Construction Practices

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with Plumbing and Gas code requirements, terminology, methods, practices, processes and safety and health used in building construction.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

BCN 2560 - Mechanical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with mechanical trades terminology, methods, practices, code requirements processes, and safety and health criteria in mechanical construction.

BCN 2721 - Construction Management/Planning

3 Credit Hours
(Fall, Spring, Summer)

The course covers project development and organization from pre-construction site investigation to final completion. The course will include the management of project estimates, plans, schedules, operations and safety. The student will become knowledgeable about documents used in the construction industry for bid, contracts, zoning, permits, bonds, loans specifications and drawings. Cost engineering, procurement, value engineering and quality assurance will be covered. Cost management through job cost analysis and purchase order systems will also be covered.

BCT 1763 - Construction Safety and Health

3 Credit Hours
(Fall, Spring, Summer)

A basic course in construction safety and health, covering such topics as: theories of accident causation; workplace hazards; hazard analysis and prevention; accident reporting; OSHA construction standard and safety practices; environmental safety; violence in the workplace; ergonomics; ethics and safety; workers' compensation; and stress on the job.

BCT 2761 - Structural Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with structural terminology, practices, methods, code requirements and safety, and health criteria in construction.

BCT 2770 - Construction Estimating

3 Credit Hours
(Fall, Spring)

A course in estimating as it relates to the construction industry covering references, estimating methods, take-off organization and presentation; material take-off, cost estimating in heavy construction, mathematical formulas for estimating, quantity take-off from plan review, and computer estimating overview.

Prerequisite(s): BCN 1230, BCN 1272.

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1080 - Essentials of Anatomy and Physiology

3 Credit Hours
(Fall, Spring)

This course surveys basic structure and function of the human body with emphasis on terminology and anatomy.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

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BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 1905 - Independent Study – Biology

1 Credit Hour
(Fall, Spring, Summer)

A course designed to (1) allow a student to complete part of a course taken elsewhere and thereby complete general education requirements, (2) to go deeper into special areas of interest.

This course may be taken up to four times for credit.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4931 - Acquisition Law Seminar

3 Credit Hours
(Spring)

This course addresses contract law as applicable to formation and administration of contracts with private and governmental agencies, with emphasis on the federal government. The following topics are also included: concepts of responsiveness and responsibility, bidding procedures, mistakes, negotiation procedures, changes, claims and dispute resolution. Students will explore the typical contracting problems that can lead to litigation.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CAP 2762 - Data Mining

3 Credit Hours
(Offered as needed)

This course offers exploration of data mining methodologies. Topics may include decision tables, decision trees, classification rules, association rules, clustering, statistical modeling, and linear models and will focus on data warehousing, data mining and data drilling.

Prerequisite(s): CGS 2541 or any programming language are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CCJ 1010 - Introduction to Criminology

3 Credit Hours
(Spring)

A study of the nature and causes of crime and delinquency; the development of delinquent and criminal behavior; theory development in criminology, crime rates and trends, victimology and particular crime pattern areas.

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CCJ 1941 - Internship – Criminal Justice

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Permission of the instructor

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CCJ 2509 - Introduction to Gangs and Crime

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of street gangs, the social factors, and the general classifications necessary for the law enforcement, corrections, and public safety professional. This course explores the history, membership, activity, current trends, and influence of street gangs. Students will be challenged to define community-based solutions and strategies to combat the criminal activity associated with street gangs.

CCJ 2934 - Special Topics in Criminal Justice

2 Credit Hours
(Fall, Spring, Summer)

This course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

*This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 1675C - Introduction to IP Telephony

3 Credit Hours
(Fall)

This course explains how companies are using IP Telephony equipment and software to efficiently upgrade existing telephone systems. In addition, the course will give the student a fundamental understanding of the architecture of voice communication and how signaling, call quality and public switched telephone networks operate in a LAN/WAN networking environment. The use of IP Telephony products will be discussed and how software allows companies to cost-effectively upgrade and eventually replace existing (legacy) telephone systems with more cost-effective and easy-to-use telephone equipment.

Prerequisite(s): CET 1600C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer

systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2682C - Cisco Voice over IP (VoIP)

3 Credit Hours
(Spring)

Instruction includes, but is not limited to, Voice over Internet Protocol (VoIP) theory, Voice Gateway configuration in a IP Telephony (IPT) solution, IP Phone configuration, design of VoIP networks and troubleshooting IPT networks. Students will design and configure various VoIP networks using case studies and laboratory equipment.

Prerequisite(s): CET 1675C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2905 - Independent Study, Computer Engineering

1 Credit Hour
(Offered as needed)

This is a directed study course to provide computer engineering students with individual projects designed to meet specific needs in areas of computer engineering technology for which present course availability is limited.

Prerequisite(s): instructor or departmental chair approval. Knowledge of basic computer and keyboarding skills are strongly recommended.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2941 - Computer Engineering Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2942 - Computer Engineering Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on

the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1843 - Introduction to E-Commerce

3 Credit Hours
(Offered as needed)

This course is designed to provide students with an overview of the dynamics of electronic commerce and how it links information technology to business objectives. Course may not transfer to all State University System institutions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

CHI 1121 - Mandarin Chinese II

4 Credit Hours
(Spring)

This course is a continuation of Mandarin Chinese I with additional vocabulary and grammar. Pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language.

Prerequisite(s): CHI 1120 or an equivalent course with a minimum grade of "C".

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CJC 2000 - Introduction to Corrections

3 Credit Hours
(Fall)

Theories of punishment and incarceration; the organization of correction programs and institutions, principles of probation and parole, role of parole and probation officers, legal implications; and problems of rehabilitation are covered. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJE 1642C - Introduction to Crime Scene Technology

3 Credit Hours
(Fall, Spring, Summer)

This course explains and discusses the principals and theories in crime scene technology. The course covers specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence, gunshot residue, blood splatter and bodies.

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2300 - Police Administration and Organization

3 Credit Hours
(Fall, Spring, Summer)

This course presents the principles of organization and administration in law enforcement including functions and activities, planning and research, public relations, personnel and training, inspection and control, records and communications and custody.

CJE 2330 - Ethics in Criminal Justice

3 Credit Hours
(Fall, Spring, Summer)

This course is a detailed exploration of ethical issues in Criminal justice with special emphasis on morality and the law, human behavior, and ethical decision making in law enforcement, corrections and the courts.

CJE 2400 - Police and Community Relations

3 Credit Hours
(Fall, Spring, Summer)

A study of the relationship of the Justice Administration agencies to the surrounding community. Examines the effect of social change and the consequences that it produces upon law enforcement, corrections, and the courts.

CJE 2600 - Criminal Investigations

3 Credit Hours
(Offered as needed)

Fundamentals of investigation; duties and responsibilities of the detective; interrogation techniques; search and techniques of protecting the crime scene; collection and preservation of evidence; modus operandi systems; scientific aids and other sources of information; court preparation and case follow-up.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

CJJ 1002 - Juvenile Delinquency

3 Credit Hours
(Offered as needed)

A study of the nature and cause of juvenile delinquency, the development of the delinquent and criminal behavior, specific criminal justice subsystem (law enforcement, judicial, corrections) problems dealing with juvenile delinquents from initial contact through final disposition and treatment. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJK 0001 - Introduction to Law Enforcement

12 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to law enforcement, the process for becoming a certified law enforcement officer, and the requirements of the academy program. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0012 - Legal

63 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to the criminal justice system, the chain-of-command system in law enforcement, Constitutional Law, Florida Statutes, and the Police Code of Ethics. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0013 - Interactions in a Diverse Community

42 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enhance student awareness and understanding of human diversity issues and to teach students skills to enable them to effectively interact with people of diverse backgrounds. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0014 - Interviewing and Report Writing

54 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to help the student learn vital communication skills including interviewing, note-taking, statement taking, and report writing. It also helps the student to develop survival skills, stress management skills, and problem solving skills utilizing the SECURE model. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0064 - Fundamentals of Patrol

36 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to understand Community Oriented Policing and how it is implemented as a problem solving model, and identify the SECURE problem solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, maintain mental and physical fitness; respond to a call, approach a suspect, make an arrest, transport a prisoner and process the prisoner at a detention facility; and understand how to direct traffic, how to enforce traffic citations, identify how to respond to alarms and conduct a building search, and search inventory and impound vehicles. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0065 - Calls for Service

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to respond to calls for service, disturbances, people in distress and court orders. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0077 - Criminal Investigations

51 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond appropriately to a person or property crime victim, witness, and suspect; conduct a preliminary investigation on crimes against persons and crimes against property offenses; conduct a follow-up investigation to establish a suspect's identity and/or ascertain facts of the case; and, give testimony in different types of court proceedings. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0078 - Crime Scene to Courtroom

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond to a crime scene, protect and survey a crime scene, process a crime scene, dust for latent prints, and document a crime scene by sketching. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0084 - DUI Traffic Stops

33 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective DUI stops, including identifying a driver under the influence of alcohol and drugs, conducting field sobriety tests, and completing a DUI investigation. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0087 - Traffic Stops

30 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective traffic stops, including ethical consideration, safety considerations, citation and warning procedures, and dealing with abandoned vehicles. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0088 - Traffic Crash Investigations

33 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0092 - Critical Incidents

45 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to identify the crowd control procedures to safely and effectively disperse or control a large group of people; understand local emergency response plans; respond to a bomb threat, assesses the scene, search and evacuate a building or suspected bomb sight, identify Weapons of Mass Destruction and properly respond to a WMD incident. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0096A - Criminal Justice Physical Fitness I

31 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0096B - Criminal Justice Physical Fitness II

32 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0300 - Introduction to Corrections

33 Clock Hours
(Offered as needed)

This course introduces students to the legal and ethical responsibilities of a correctional officer. Legal terms and definitions are explained. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0305 - CJSTC Communications

42 Clock Hours
(Offered as needed)

This course covers the entire report writing process. Topics include interview and interrogation, interpersonal communication, and practical exercises. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0310 - Officer Safety

12 Clock Hours
(Offered as needed)

Correctional officer safety procedures are learned. Students will learn to identify potential hazards and learn how to safely respond. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0315 - Facility and Equipment

12 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for inspecting a correctional facility and equipment. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0320 - Intake and Release

18 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for admitting and releasing inmates in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0325 - Supervising in a Correctional Facility

42 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for supervising inmates in a correctional facility. They also learn to detect crimes and rule violations in various correctional facility settings. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0330 - Supervising Special Populations

21 Clock Hours
(Offered as needed)

Students learn how to identify and supervise special population groups, such as threat groups, juveniles, elderly, and mentally ill inmates. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0335 - Responding to Incidents and Emergencies

18 Clock Hours
(Offered as needed)

Students learn how to identify and respond to situations involving escapes, riots, bomb threats, fires, and medical

emergencies in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0340 - Corrections PSAV Physical Fitness

30 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0780 - Cross-Over Law Enforcement to Corrections

16 Clock Hours
(Offered as needed)

This course is a component of the Corrections Cross-Over Basic Recruit Academy. This course is designed to enhance Law Enforcement recruits' awareness and understanding of corrections and to teach student skills which will enable them to cross-train into the corrections profession. This course includes classroom instruction. This course is open only to students who have successfully completed the Law Enforcement Basic Recruit Academy and passed the state certification examination for Law Enforcement.

Prerequisite(s): Law Enforcement Basic Recruit Training Program.

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CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2130 - Criminal Evidence and Procedure

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of criminal procedure particularly applied to search and seizure and evaluation of evidence.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

CLP 1001 - Personal Adjustment

3 Credit Hours
(Fall, Spring, Summer)

Psychology of adjustment, application of psychological theory for problem solving and better mental health. An examination of psychological defense mechanisms and adaptive behavior.

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2658 - Advanced Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the advanced IOS programming topics and provides a broad perspective of the IPhone SDK platform. It begins with an overview of the Objective-C language and progressed into the advanced details of the UIKit, as well as several other frameworks essential for advanced development of the iPhone and iPad.

Prerequisite(s): COP 2654 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2662 - Advanced Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches advanced concepts and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devises and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CRW 2001 - Creative Writing I

3 Credit Hours
(Fall, Spring, Summer)

Instruction and practice in writing fiction and poetry. Students will submit a poetry portfolio and complete at least one short story.

CRW 2002 - Creative Writing II

3 Credit Hours
(Fall, Spring, Summer)

Advanced work in poetry and prose modes with emphasis on revision. Students will submit a poetry portfolio and write and revise at least one complete short story. Students will prepare creative work for publisher market.

CRW 2100 - Introduction to Fiction Writing

3 Credit Hours
(Offered as needed)

Practice in writing fiction using various points-of-view. Students will submit completed short stories for workshop. Upon agreement with the instructor, students may elect to develop novel chapters with synopsis. Students will prepare creative work for publisher market.

CRW 2201 - Introduction to Creative Nonfiction

3 Credit Hours
(Offered as needed)

This writing course examines the narrative possibilities of creative nonfiction. We will explore structure, technique, and authorial presence in representative works of established sub-genres, including literary journalism, travel and/or food writing, memoir, the lyric essay and collage.

CRW 2300 - Introduction to Poetry Writing

3 Credit Hours
(Offered as needed)

Practice in writing poetic forms employing poetic techniques. Students will workshop completed poems and submit a portfolio of revised poetry. Students will prepare creative work for publisher market.

CRW 2302 - Intermediate Poetry Writing

3 Credit Hours
(Offered as needed)

This course builds on poetry writing skills developed in CRW 2300. Students will examine styles and techniques of contemporary poets and develop a portfolio of original work with attention to the revision process. Students will prepare creative work for publisher market.

Prerequisite(s): CRW 2300.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This

is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2143C - CompTIA Server+

3 Credit Hours
(Spring)

This course provides advanced concepts in server hardware components and troubleshooting in a non-vendor-specific environment. Introduction to server installation, server storage concepts, administering services, server roles, virtualization, performance monitoring, security, data protection, and maintenance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares

the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2302C - Windows Active Directory

3 Credit Hours
(Spring)

This course focuses on a Windows server directory service environment, including forest and domain structure, DNS, site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user/group/computer account strategies. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2321 - UNIX Administration

3 Credit Hours
(Offered as needed)

This course is designed for network administrators in a UNIX operating environment. UNIX operating system concepts, architecture and administration will be explored using Linux. Includes shell programming, database managements, rapid application development, and programming tools such as PERL and C++.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CTS 1106

▲Technology-Across-the-Curriculum Course.

CTS 2346C - Windows Server 2016 Administrator

3 Credit Hours
(Offered as needed)

This course will provide students with the opportunity to develop the skills required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data. Recommended knowledge level: A+, Network +, Security + and Win client operating system. This course prepares the student for the MCITP exam.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2347C - Windows Network Infrastructure 2010

3 Credit Hours
(Spring)

This course addresses the configuration of Windows Server network infrastructure. Topics covered include: routing and remote access, network access protection, network authentication, IPv4 and IPv6 addressing, DHCP, DNS, WINS, DFS, IPSec, and security. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2390C - Installing and Configuring Windows Server 2016

3 Credit Hours
(Spring)

This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skill set and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking services, and initial Hyper-V configuration and is also preparation material for, Exam 70-410: Installing and Configuring Windows Server 2016.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2391C - Administering Windows Server 2016

3 Credit Hours
(Spring)

This course is the second in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skills and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server 2016 infrastructure, such as user and group management, network access and data security and is also preparation material for, Exam 70-411: Administering Windows Server 2016.

Prerequisite(s): CTS 2390C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2392C - Configuring Advanced Windows Server 2016

3 Credit Hours
(Summer)

This course is the third in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 Infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2016 infrastructure, such as identity management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance and rights management. This course is also preparation material, and maps directly to, Exam 70-412: Configuring Advanced Windows Server 2016 Services.

Prerequisite(s): CTS 2391C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2437 - Administering SQL Server Database

3 Credit Hours
(Offered as needed)

This course provides students with the skills required to install, configure, administer and troubleshoot the client-server database management system of Microsoft SQL Server. This is preparation for the MCP exam, an elective requirement for Windows MCSA/MCSE.

Prerequisite(s): CTS 1134 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2438 - Advanced SQL Server Database

3 Credit Hours
(Offered as needed)

This course provides students with advanced topics required to install, configure, administer and troubleshoot the client-server database management system of Microsoft SQL Server. This course is designed to prepare the student for certification, an elective requirement for the Windows MCSA/MCSE.

Prerequisite(s): CTS 2437 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2440 - Introduction to Oracle

3 Credit Hours
(Offered as needed)

An introduction to Oracle and the design and creation of relational databases (using Oracle). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL) integrated into Stored Procedures, Functions, Packages and Triggers (PL/SQL Programming).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

DAA 1100 - Fundamentals of Modern Dance

2 Credit Hours
(Fall, Spring,, Summer)

This beginning dance class serves as an introduction to the art of contemporary dance. It includes instruction and practice in basic modern dance techniques, improvisation, dance forms and brief historical overview.

This course may be taken up to four times for credit.

DAA 1101 - Modern Dance II for Non-Majors

2 Credit Hours
(Fall, Spring, Summer)

This course includes a continued analysis of the modern dance at an intermediate level. Instruction and practice in specific contemporary dance techniques and performance qualities will be stressed.

This course may be taken up to four times for credit.

DAA 1104 - Modern I for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to affect an understanding of the art of the modern dance. It includes a brief history of the dance; instruction and practice in basic dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time. This course maybe taken 4 times for credit.

This course may be taken up to four times for credit.

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1201 - Ballet II for Non-Majors

2 Credit Hours
(Fall, Spring, Summer)

Intermediate Ballet is designed to train the student in the tradition of the art of the classical ballet beyond the basics. Continued development of the body as an expressive instrument for ballet movement will be stressed as students reach the proficiency level necessary to perform the more complicated steps of an intermediate class.

This course may be taken up to four times for credit.

DAA 1204 - Ballet I for Majors

2 Credit Hours
(Fall, Spring, Summer)

A beginning dance course designed to serve as an introduction to the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1500 - Jazz I for Non-Majors

1 Credit Hour
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken four times for credit.

DAA 1500A - Beginning Jazz

1 Credit Hour
(Fall, Spring, Summer)

This course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken up to four times for credit.

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.

DAA 1521 - Tap II

1 Credit Hour
(Fall, Spring)

The Tap II dance class includes a more in-depth history of tap dance, instruction and practice utilizing tap and exploring its various styles.

Prerequisite(s): DAA 1520.

This course may be taken up to four times for credit.

DAA 1580 - Musical Theater Dance I

1 Credit Hour
(Summer)

This beginning course covers the study of musical theater dance techniques and styles as related to a specific performance experience, usually Creative Dramatics. Students must participate in designated rehearsals and performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 1680 - Dance Workshop

1 Credit Hour
(Fall, Spring)

This course includes instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

This course may be taken up to four times for credit.

DAA 1681 - Dance Ensemble

1 Credit Hour
(Fall, Spring)

The student shall participate in the preparation and performance of original dance compositions to include Dance Line and Show Choir performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2105 - Modern II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to further the student's understanding of the art of the modern dance. It includes continued study in history of the dance; instruction and practice in intermediate level dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2205 - Ballet II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance course is designed to serve as an further training in the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2505 - Jazz II for Majors

2 Credit Hours
(Fall, Spring)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time. This course may be taken 4 times for credit.

Prerequisite(s): DAA 1504

DAA 2581 - Musical Theater Dance II

1 Credit Hour
(Summer)

The continued study of Musical Theater dance techniques and styles as related to a specific performance experience, usually Summer Ensemble Workshop. Students must participate in rehearsals and performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2610 - Dance Composition

2 Credit Hours
(Fall, Spring)

An introduction and practice in the application of compositional tools encourages the student to explore and compose dance. By studying the body's movement in time and space the student will improve technical skills, develop improvisation and choreographic skills and enhance overall dance performance. Previous dance experience is helpful.

This course may be taken up to four times for credit.

DAA 2682 - Dance Workshop II

1 Credit Hour
(Fall, Spring)

This course includes continued instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

Prerequisite(s): A demonstration of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography)

1 Credit Hour
(Fall, Spring)

This course includes the continuation of study and participation in all rehearsals of selected works of dance repertory and/or original choreography culminating in public performance.

This course may be taken up to four times for credit.

DAN 1750 - Dance Conditioning

1 Credit Hour
(Fall, Spring)

Dance Conditioning is an excellent course in which to begin your dance training. It is designed to improve fundamentals for the beginning/intermediate student through daily practice in floor work, yoga, and Pilates exercises. This movement class will get you ready to meet the challenges of other dance classes by toning, strengthening and

preparing the body to move.

This course may be taken up to four times for credit.

DAN 2120 - Dance Appreciation

3 Credit Hours
(Offered as needed)

This course is a study of the development of dance as an art form, as entertainment, and how it relates to the history of cultures and societies, emphasizing the evolution of dance in the specific genres such as ballet, modern dance, jazz dance, and world dance forms. Designed to heighten student awareness of dance as an integral part of society and establish an appreciation of dance's impact on the making of art. This course will give the student a foundation level understanding of dance as an art form and its historical and cultural significance. The major periods of dance history, master choreographers, and their works will be explored through lecture, discussion and media presentation. DAN 2120 is not an activity course.

DEA 0020 - Pre-Clinical Procedures Theory

60 Clock Hours
(Offered as needed)

This course is designed to provide an introduction to the dental assisting profession to include orientation to four handed dentistry and general dental office procedures including, but not limited to basic principles of disease prevention, patient data collection and assessment, and instrumentation. Emphasis is on adhering to safety guidelines as specified by OSHA.

Corequisite(s): DEA 0020L.

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DEA 0020L - Pre-Clinical Practice Lab

90 Clock Hours
(Offered as needed)

This is a comprehensive chair side competency based course. The course provides the skills practice necessary for dental assisting students entering four handed dentistry practice including but not limited to infection control, taking and recording vital signs, assisting with operative procedures, principles of preventive dentistry, instrument identification, and use and maintenance of equipment. Emphasis is on aseptic technique and clinical competency with procedures performed in a contemporary dental practice.

Corequisite(s): DEA 0020, DES 0103L.

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DEA 0130 - Oral Pathology

30 Clock Hours
(Offered as needed)

This course is a general study of the scientific and clinical concepts that include additional knowledge base necessary to the practice of dental assisting. Students will study the normal and abnormal conditions of the oral cavity such as dental caries prevention, the dental caries process and recognition of various common pathological conditions. Oral pathology, histology and embryology are included. Emphasis is on the interrelationship of the information presented with the clinical practice of dental assisting.

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DEA 0803L - Clinical Practice I

150 Clock Hours
(Offered as needed)

This competency based clinical course provides a real world setting in which to integrate the laboratory and clinical skills learned in the classroom. The student receives closely supervised hands on training in chair side dental assisting through rotations at community dental offices. Progress is evaluated using predetermined competency guidelines. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 90 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Corequisite(s): DEA 0020, DEA 0020L.

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DEA 0851L - Clinical Practice III

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice II, providing a real world setting for students to practice the training and clinical skills learned in class including x-ray film placement and cone positioning. The student is assigned to various offices in the community including specialty offices and general dentistry offices. Students assist the dentist and staff with various function of a Dental Assistant at a more advanced level of proficiency. Students must provide their own transportation and must have current CPR training along with up-to-date immunizations. Specific procedure requirements and 180 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DEA 0852L, DES 0205, DES 0205L.

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awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DEA 0852L - Clinical Practice II

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice I. It provides a real world setting for students to receive additional training in the clinical skills learned in class. Students are assigned to various offices in the community including but not limited to general dentists, oral surgeons, orthodontists, periodontists, and endodontists. Performance evaluations are utilized to measure competency and provide feedback from the local dental offices to the instructor regarding the students' competency level. Skills are strengthened in Seminar Lab. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 150 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DES 0400

Corequisite(s): DES 0830, DES 0830L.

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DEA 0936 - Dental Assisting Seminar

60 Clock Hours
(Offered as needed)

This course is designed to provide a review of materials commonly covered on the Dental Assisting National Board (DANB) Exam. Topics include but are not limited to infection control, general chair side procedures, and radiographic technique. The seminar will provide a mock board examination, and opportunities for review, problem solving, and strengthening skills. The course also serves as an opportunity for feedback from students' Clinical Practice.

Prerequisite(s): DEA 0852L, DEA 0803L, DES 0205, DES 0205L

Corequisite(s): DEA 0803L, DES 0206L.

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DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

DES 0103 - Dental Materials

60 Clock Hours
(Offered as needed)

This course is a comprehensive study of the theory of manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. The competency based lab that accompanies this course includes exercises to illustrate application and use of selected materials. Students will study various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, as well as acrylic plastics. Students will become familiar with various pieces of dental laboratory equipment and their uses.

Corequisite(s): DES 0103L, DEA 0020L.

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DES 0103L - Dental Materials Lab

90 Clock Hours
(Offered as needed)

This course is a comprehensive study of the manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. Emphasis is on practical application as it relates to the role of the dental assistant in the contemporary dental practice. It is a competency based lab that accompanies the theory course and includes exercises to illustrate application and uses of selected materials. Students practice the use of various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, and acrylic plastics.

Corequisite(s): DES 0103, DEA 0020L.

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DES 0205 - Dental Radiology Lecture

60 Clock Hours
(Offered as needed)

This course is designed to introduce the theory, application and principles of radiographic exposure and processing techniques used in dentistry. Students will receive instruction including but not limited to historical data, radiation safety, exposure, processing, mounting and error prevention. Image interpretation of radiographic anatomical structures will be included.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205L.

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DES 0205L - Dental Radiology Laboratory I

60 Clock Hours
(Offered as needed)

This laboratory course assists students in radiographic performance techniques using DXTR manikins to achieve competency prior to exposure of various patients with varied dentitions. Students practice exposing, mounting, radiographic interpretation, safe darkroom procedures, identification of landmarks and distinguishing radiographic pathology from normal landmarks. Clinical radiographic skills necessary to produce diagnostic quality radiographs including bitewings, periapical radiographs, and panoramic x-rays will be covered. Emphasis is on patient and operator safety guidelines and producing diagnostic quality radiographs.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205.

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DES 0206L - Dental Radiology Laboratory II

60 Clock Hours
(Offered as needed)

This laboratory course assists students in additional radiographic performance techniques to include surveys on patients with varied dentitions. Students practice more advanced radiographic exposure techniques, interpretation, additional darkroom procedures, identification of landmarks and distinguishing various radiographic pathology. Clinical radiographic skills necessary to produce diagnostic quality x-rays including but not limited to bitewings, periapical radiographs, and panoramic surveys on actual patients will be covered. Emphasis is placed on patient and operator safety guidelines and producing diagnostic quality radiographs during this course.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L, DES 0205L

Corequisite(s): DEA 0851L.

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DES 0324 - Interpersonal Communications Skills

30 Clock Hours
(Offered as needed)

This course is designed to implement interpersonal and effective communication skills in the practice of dentistry. It includes team building strategies, oral and written communications skills with the correct use of terminology commonly used in dentistry. Professionalism in verbal and nonverbal communications is emphasized. Students will be introduced to the legal and ethical scope of responsibilities for dental assistants and interpersonal relations in the dental office. Providing oral health instructions and post operative instructions for patients will be introduced. Scenario-based role playing is used to augment student learning of course content.

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DES 0400 - Dental Anatomy

90 Clock Hours
(Offered as needed)

This course provides a detailed study of the orofacial and related structures of the head and neck including, but not limited to the eruption, identification and function of the human dentition, study of bony, circulatory, muscular and nervous systems of the head, neck and surrounding structures associated with the oral cavity. A brief introduction to oral histology and embryology will be included.

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DES 0501 - Dental Practice Management

60 Clock Hours
(Offered as needed)

This course includes theory and content relating to practical administrative duties performed in the dental office. Lectures and role playing activities are related to the responsibilities of the dental assistant. Topics include but are not limited to appointment scheduling, billing, collections, record keeping, clerical and dental supply inventory. Students are introduced to the use of dental practice software with hands on computer experience. Legal responsibilities, interpersonal relations, and interview skills are included.

Prerequisite(s): DES 0205, DES 0205L

Corequisite(s): DEA 0936.

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DES 0602 - Pharmacology and Dental Office Emergencies

30 Clock Hours
(Offered as needed)

This course is designed to familiarize the dental assisting student with the basic concepts and considerations regarding pharmacology and pharmaceutics used in dentistry. Topics presented include nitrous oxide monitoring, emergency procedures and protocol. Lectures will include recognition of emergency conditions in the dental office, not limited to syncope, anaphylaxis, and cardiovascular incidents. Emphasis is placed on the role of the dental assistant in the prevention and management of dental office emergencies.

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DES 0830 - Expanded Function Theory

30 Clock Hours
(Offered as needed)

This course introduces the dental assisting student to the dental specialty practices and more advanced clinical skills. It also provides the theory of dental specialty practice administration as it relates to the role of the dental assistant including ethical and legal ramifications. Lectures relate topics including but not limited to dental specialty procedures, instruments used in the specialty practices and duties delegated to dental assistants according to the rules and regulations of the Florida Dental Practice Act. Role playing and problem solving activities using case studies relate to duties delegated to dental assistants.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830L.

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DES 0830L - Expanded Functions Lab

60 Clock Hours
(Offered as needed)

This laboratory course accompanies the clinical practice lecture course DES 0830 and provides opportunity for students to practice application of the duties delegated to dental assistants according to the Florida Dental Practice Act. Students become more proficient in more advanced skills. Competencies containing information and behavioral objectives allow students to master each skill before advancing to the next.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830.

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DES 0844 - Infection Control for Dental Assistants

30 Clock Hours
(Offered as needed)

This course is a general study in biomedical sciences of preventive dentistry to familiarize the dental assisting student with basic principles of microbiology, basic body structures, and their functions and effects as manifested in the oral cavity. The course also covers the effects of nutrition and the role of microorganisms in dental health and blood borne pathogens.

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DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

EDE 4223 - Integrating Art, Music, and Physical Education

3 Credit Hours
(Summer)

This integrative course provides students with critical understanding of art, music, and physical education. Emphasis is placed on the effective integrative lesson planning and modeling techniques to art, music, and physical education in elementary schools. This course requires a minimum grade of "C".

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4226C - Integrated Language Arts, Social Science and Literature

3 Credit Hours
(Fall, Spring)

This course is designed to prepare candidates to teach language arts and social science in elementary classrooms. Teacher candidates will develop units of study that integrate literature, language arts, with social science content. Emphasis is on constructivist principles and methodology. Teacher candidates will plan and deliver standards-based language arts and social science lessons designed to meet the needs of diverse learners including English language learners (ELLs) and students with exceptionalities. This course requires 18 hours of field experience in a K-6 classroom setting. Current background check (fingerprinting) acceptable to the district in which the field experience will take place is required for this course. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4930C - Seminar in Elementary Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace. Includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EDF 1005A - Introduction to the Teaching Profession - A

3 Credit Hours
(Fall, Spring, Summer)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. This course is intended for those students that are not planning to enter a degree program leading to teacher certification. An additional fingerprinting cost may be associated with this course. If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

EDF 1006 - Field Experience in Education

1 Credit Hour
(Offered as needed)

This Educational Field Experience course allows students to work in an educational setting for a semester to meet requirements for admission to the BSE program. This course requires a minimum grade of "C". Current background check (fingerprints) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): permission of department chair.

EDF 1006A - Field Experience in Education

2 Credit Hours
(Offered as needed)

This Educational Field Experience course allows students to work in an educational setting for a semester to meet requirements for admission to the BSE program. This course requires a minimum grade of "C". Current background check (fingerprints) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): permission of department director.

EDF 2085 - Introduction to Diversity for Educators

3 Credit Hours
(Fall, Spring)

This course will provide the student with the opportunity to explore personal values and attitudes toward cultural diversity. Designed for the prospective educator, the theoretical component will examine the issues of teaching in culturally diverse classrooms. An eighteen-hour field experience and examination of educational materials will enhance the student's understanding of multiculturalism. An additional fingerprinting cost may be associated with this course. This course requires a minimum grade of "C" if used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3910A - Projects in Teacher Education

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of Teacher Education students completing an artifact required in the B.S.E. program. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

EDF 3910P - Projects in Teacher Education – Field Placement

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of Teacher Education students completing field experience in the B.S.E. program. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410 - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring) Online Only

Practicing teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. This course is restricted to practicing teachers.

Prerequisite(s): upper division standing.

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 4940 - Internship

9 Credit Hours
(Offered as needed)

Supervised teaching in a public or private school. Student teaching assignments will be made by the department of teacher education field placement coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing with permission of department chair.
EDE 4223, EDE 4226C, EDF 3214, EDF 3430, EDG 3410C, EDG 3343, EEX 3070, LAE 4343C, MAE 3350C, RED 3309C, RED 3511C, RED 4312, RED 4519C, SCE 3350C, TSL 3081C, TSL 4140C

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1401 - The Family In Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

This course is comprehensive in scope, emphasizing skills and concepts of parenting which include: adjustment to parental roles; parent-child communication, care, growth, and development of children; cultivating strong families;

special concerns; alternative family structures; educational institutions working effectively with parents; and agencies and legislation affecting children and parents.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEC 3213 - Teaching the Language Arts In Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on the development of language and literacy in children ages birth through age four. Emphasis will be placed on understanding the process of emergent literacy including vocabulary and language, phonological awareness, print knowledge and comprehension; and on designing a developmentally appropriate language arts program in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3227 - Art, Music, and Movement

3 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of the creative developmental process in the life of children from birth through four years old. Emphasis will be placed on the teacher's role in developing opportunities and materials for young children to express themselves creatively through music, drama, dance and two- and three-dimensional art and on providing varied opportunities for young children to gain an appreciation of art, music, drama, and dance in ways that reflect cultural diversity in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies

3 Credit Hours
(Offered as needed)

This course is designed to prepare students to teach social studies In the early childhood classroom. Emphasis is on implementing the project approach to investigate components of social studies to include: individual development and identity; people, places, and environments, technology and our world; and civic ideals and practices. The student will increase and apply knowledge and skills in the Florida Early Learning and Developmental Standards relevant to this content area.

EEC 3511 - Curriculum for Infants and Toddlers

3 Credit Hours
(Offered as needed)

The focus of this course will be on the design, implementation and evaluation of programming and curriculum that promotes growth and development of young children birth to three years old and aligns with the early learning and developmental standards. Study of typical and atypical development will be included. Emphasis will be on working effectively with families of infants and toddlers.

EEC 3524 - Professionalism/Program Development

4 Credit Hours
(Offered as needed)

Focus of this course will be on management and leadership in early childhood education programs. Topics will include mentoring adults, professional development, staff assessment, program evaluation, and child advocacy. Career options in the field of early childhood education will be explored. This course will require observing and participating in a program or agency related to early childhood education.

EEC 4404 - Families and Diversity

3 Credit Hours
(Offered as needed)

This course will focus on building positive relationships with families through communication and involvement. Focus will include developing an awareness of diversity and multicultural considerations in working with families of young children. The course will explore the role of the family and the influence of the community on the development of young children in a diverse society; and will prepare the student to work effectively with families and communities.

EEC 4421 - Teaching Math and Science in Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of how concepts, skills and attitudes in early childhood mathematics and science are developed in young children ages birth through age four. Math topics will include number sense and operations, patterns, geometry, and measurement. Science topics will include scientific inquiry, physical science, life science and earth science. Emphasis will be on the alignment of the Early Learning and Developmental Standards with a developmentally appropriate approach to teaching math and science in the early childhood classroom. This course will require observing and participating in an early childhood classroom.

EEC 4613 - Systematic Observation and Assessment

3 Credit Hours
(Offered as needed)

The focus of this course will be on understanding the purpose of child assessment, implementing developmentally appropriate practices in formal and informal child assessment, and using assessment results to support learning, to identify special needs, to evaluate programs, and to respond to program accountability requirements. A field experience is required to practice various methods of assessment in an early childhood setting.

EEC 4940 - Internship

9 Credit Hours
(Fall, Spring)

Supervised teaching in an assigned Early Childhood Education setting. Student teaching assignments will be made by the Department of Teacher Education Office. This course requires a minimum grade of "C". Current background check (fingerprinting) is required for this course.

Prerequisite(s): Upper Division standing with permission of Department Chair

EEL 2603C - Robotics-Mechanics and Controls

3 Credit Hours
(Fall)

This course introduces the student to robotics. Instructional topics will include robot classifications, applications, Input/Output (I/O) and sensor interfacing.

Prerequisite(s): ETS 1542C

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies,

digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

EET 1141C - Solid State Electronics

3 Credit Hours
(Fall, Spring)

This is the third course required for Electronics Aide certificate. This course introduces the student to the concept, components, and uses of solid state electronics. Topics include semiconductor devices; thyristors and diodes, transistors, amplifiers, power supplies, oscillators, and optoelectronics. The use of capacitors and inductors in solid state electronics will be also covered. The design, set-up, and troubleshooting solid state circuits and devices using various power supplies and function generators will be dispersed throughout the class.

Prerequisite(s): EET 1025C

EET 1180C - Industrial Electronic Troubleshooting

3 Credit Hours
(Fall, Spring)

This course covers troubleshooting procedures for a variety of electronic equipment and circuits common to industrial applications. The student will develop and implement trouble shooting protocols and plans, equipment monitoring plans, a preventive maintenance plan, and select appropriate test and monitoring equipment. Safety in an industrial setting will be stressed and reinforced through a series of lab exercises throughout the course.

Prerequisite(s): EET 1084C

EET 2155C - Linear Integrated Circuits

3 Credit Hours
(Fall, Spring)

This course covers the fundamentals and applications of linear integrated circuits and operational amplifiers. The course covers includes inverting and non-inverting amplifiers, comparators, signal generators, differential and instrumentation amplifiers, operational amplifier specifications, active filters, modulator-demodulator integrated circuits, timers, analog to digital converters (ADC), and digital to analog converters (DAC) and measurement and analysis of linear circuits and devices.

Prerequisite(s): EET 1015C, EET 1025C

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEX 3604 - Classroom Management in Early Childhood Education

3 Credit Hours
(Offered as needed)

The focus of this course is on implementing effective classroom management practices including establishing an appropriate physical environment, setting up appropriate classroom routines and rules and creating a positive classroom community. Emphasis will be on strategies for guiding children's behavior, teaching social problem-solving skills and responding appropriately to challenging behaviors.

EEX 4201 - Young Children with Special Needs

3 Credit Hours
(Offered as needed)

The focus of this course will be on working with young children birth through age four in an inclusive early childhood classroom. Emphasis will be on identifying typical and atypical development, creating an inclusive early childhood learning environment, understanding special education law, developing an awareness of resources for inclusive practice to meet the needs of young children and their families.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

EGN 1130C - Descriptive Geometry

3 Credit Hours
(Fall, Spring, Summer)

Covers basic principles of orthographic projection, auxiliary views and rotation as they apply to points, lines and planes in space; addition of coplanar and non-coplanar vectors; intersections and developments; and selected abstract, exponometric and oblique projection, and practical problems.

Prerequisite(s): EGN 1111C or equivalent.

EME 2040 - Introduction to Technology for Educators

3 Credit Hours
(Fall, Spring Summer)

This course will develop competencies necessary to integrate technology into classroom instruction. Students will survey a variety of instructional technology materials, software, and systems, as well as learn to use these in the classroom environment. This course requires a minimum grade of “C” if used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

EMS 0119 - Emergency Medical Technician for Firefighters

140 Clock Hours
(Fall, Spring, Summer)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director

Corequisite(s): FFP 0010, FFP 0020, EMS 0119L

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EMS 0119L - Emergency Medical Technician Lab for Firefighters

160 Clock Hours
(Fall, Spring, Summer)

This course provides an integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director.

Corequisite(s): FFP 0010, FFP 0020, EMS 0119

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1335 - Emergency Vehicle Operators Course

1 Credit Hour
(Offered as needed)

Students receive basic education and information on the safe and effective operation of emergency vehicles.

Prerequisite(s): permission of the EMS Program Director.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency

performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

EMS 2940 - Internship: Emergency Medical Services

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

ENC 0017 - Integrated Reading and Writing I

4 Credit Hours
(Fall, Spring, Summer)

This course is designed to develop reading comprehension and writing language skills for students whose entry level placement scores do not meet requirements for degree credit (not applicable for degree completion). The course includes a thorough review of English grammar and conventions and practice in writing paragraphs and essays while building skills in vocabulary and academic reading comprehension. Students must pass the class with a "C" or better grade.

Prerequisite(s): Appropriate score on PERT or other approved assessment.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 0027 - Integrated Reading and Writing II

4 Credit Hours
(Fall, Spring, Summer)

This course is designed to develop reading comprehension and writing language skills for students whose entry level placement scores do not meet requirements for degree credit (not applicable for degree completion). The course includes a review of English grammar and convention and practice in writing persuasive essays while building skills in vocabulary and academic reading comprehension. Student must pass the class with a "C" or better grade.

Prerequisite(s): Minimum grade of "C" in ENC 0017 or appropriate PERT or other approved assessment score.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 0056 - Developmental Writing Module

2 College Prep Credits
(Offered as Needed)

This course is designed to develop written language skills for students whose entry placement scores do not meet requirements for degree credit courses (not applicable for degree completion). Conducted in a lab setting, this course is self-paced course, designed to allow students to focus on their individual grammar, usage, and writing needs to prepare for successful entry into college credit English courses (not applicable for degree completion). This course may be taken in place of ENC 0027 if a student has a placement score of 98-102 on the PERT. Students may exit Developmental Writing Module by passing the coursework and by obtaining a passing score on the Departmental Exit Exam.

Prerequisite(s): Students must score 98-102 on the PERT or on an elective basis score 103 or higher on the PERT.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1101L - English Composition I Lab

1 Credit Hour
(Fall, Spring, Summer)

An instructor directed writing workshop designed to improve student's opportunity for success in ENC1101. Students will strengthen writing and grammar skills necessary to master the topics and concepts covered in ENC1101. Areas of focus include, but are not limited to, the following: expository and argumentative writing; appropriate diction; conventions of Standard American English grammar, punctuation, sentence structure; conventions of MLA.

Prerequisite(s): ENC0025 and REA0017 or equivalent with a "C" or better grade, or a score of 100-116 on the PERT, or on an elective basis with a score of 103 or higher on the PERT.

Corequisite(s): ENC 1101

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENT 2931 - Selected Studies in Entrepreneurship

1 Credit Hour
(Spring)

In this course, topics of current interest are presented in group instruction.

ENV 4610 - Sustainable Logistics

3 Credit Hours
(Spring)

This course introduces students to current and future trends in logistics technology, policy and sustainability. Topics include, source sustainability, environmental impacts of existing and emerging technologies, and local environmental conditions and the global climate.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking,

mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1801C - Technical Illustration

3 Credit Hours
(Fall)

The purpose of this course is to help students develop the skills, knowledge, and attitudes necessary to be job entry-level qualified as technical illustrators.

Prerequisite(s): ETD 1112 or EGN 1130C, and ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETD 2218 - Geometric Dimensioning and Tolerancing

4 Credit Hours
(Fall, Summer)

An introductory course in geometric dimensioning and tolerancing using the geometric method nationally accepted according to ASMEY 14.5M. Topics covered include: definition and terms, symbols, datum referencing, locational tolerancing, form tolerancing, profile tolerancing, orientation and runout tolerancing, and math for positional tolerancing.

Prerequisite(s): ETD 1217 or equivalent.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

ETD 2735 - Mechanical Drafting III

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include: isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, and precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 2218 and ETD 2731 or equivalent.

ETD 2802C - Technical Illustration II

3 Credit Hours
(Spring)

The purpose of this course is to help students develop advanced skills, knowledge, and attitudes necessary as

technical illustrators, to include oblique, and axiometric projections, perspective and exploded pictorial drawings, and related techniques.

Prerequisite(s): ETD 1340C or equivalent.

ETD 2905 - Independent Study – Drafting

1 Credit Hour
(Fall, Spring, Summer)

Practical treatment of special geometry, graphics, and design with emphasis on individual work projects utilizing such graphical techniques as orthographic projection, perspective drawing, auxiliary views, topographic drawing, and graphing.

Prerequisite(s): EGN 1111C and ETD 1112 or permission of instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
* This course may be taken up to four times for credit.

ETG 1941 - Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

ETI 2419C - Advanced Concepts of CNC Machines and CNC Machining Practices

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with advanced concepts in CNC machines and CNC machining to include: theory, operation, setup, safety, and practices.

Prerequisite(s): PMT 2261C or PMT 2262C

ETI 4205 - Applied Logistics

3 Credit Hours
(Offered as Needed)

Introduction to logistics. Emphasis on practical applications. Includes systems engineering, cost/ systems effectiveness, reliability, maintainability, system functional analysis, logistic support analysis, life cycle cost analysis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

ETM 1315C - Hydraulics & Pneumatics Fundamentals

3 Credit Hours
(Spring)

This course introduces the student to basic hydraulic and pneumatic fundamentals. Instructional topics will include components, fluid pressure and flow and basic circuit design and application.

ETS 1511C - Motors and Controls

3 Credit Hours
(Fall, Spring)

This course explores the theory and application of AC and DC motors, types of single-phase motors, three-phase power, three-phase motors, remote and local control, forward and reversing motor starters, and various motor control circuits. Wiring and troubleshooting exercises of electric three-phase motor control circuits are emphasized in a wide range of applications.

Prerequisite(s): EET 1084C

ETS 1542C - Introduction to Programmable Logic Controllers

3 Credit Hours
(Fall)

This is an introductory course in Programmable Logic Controllers (PLCs.) The student will learn basic concepts with a focus on programming and practical applications.

Prerequisite(s): EET 1084C

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1940 - Internship, Environmental Science

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum grade of "B" in any college level science course and permission of instructor.

EVR 3949 - Extended Internship, Environmental Science

4 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum Grade of "B" in any college-level science course and permission of instructor.

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0077 - First Responder for Public Safety Personnel

45 Clock Hours
(Fall, Spring, Summer)

This course trains public safety members who are the first to arrive at an emergency in providing efficient and accurate pre-hospital care. Students assess patients for wounds to determine if trauma, shock, burns or closed airways are a problem and how to address those issues by dressing wounds, stabilizing the person or administering oxygen. They immobilize patients and address common emergency medical issues with basic treatments. This course includes hands-on, practical experience and is necessary to be eligible for first responder certification.

This course is a co-requisite course for students entering the Firefighting Certificate program who do not have certification for first responder, EMT, or paramedic.
*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 1140 - First Responder for Public Safety Personnel

3 Credit Hours
(Offered as needed)

This course introduces the student to the skills and techniques used for first response to medical emergencies. Classroom instruction includes a variety of medical related topics encountered by public safety personnel. Practical exercises and scenarios are included to enhance classroom instruction and skill development.

FFP 1301 - Fire Service Hydraulics

3 Credit Hours
(Offered as needed)

Introduction to the study and characteristics of hydrostatics and hydrodynamics in the fire service; to include basic hydraulic measuring units, facts, theories, and formulas for problem solving. The course covers the relationship between flow and pressure and mathematical hydraulic formulas.

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these

differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

FFP 2720 - Company Officer

3 Credit Hours
(Fall, Spring, Summer)

Designed to assist fire officers in solving the varied problems and situations they will be required to manage effectively in today's ever changing fire service. The curriculum includes a review of fire department organization and administration, management theory, leadership, communication, motivation, and small group dynamics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2780 - Fire Department Administration

3 Credit Hours
(Fall, Spring, Summer)

The course is designed to present the principles of management theory, and its application in the fire service. The course is intended for officers whose area of responsibility encompasses long and short range planning, budgeting and administration.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

FFP 2823 - Technical Applications in Emergency Management

3 Credit Hours
(Offered as needed)

This course explores issues and problems associated with the use of technology in emergency management. It examines strategies to overcome these issues and problems. Some of the subjects treated are use of the Internet, spatial analysis applications in vulnerability analysis, decision support systems, and emerging technologies.

FFP 2834 - Societal Issues in Disaster Management

3 Credit Hours
(Offered as needed)

This course examines human response to disaster events, including political and economic factors influencing vulnerability. It examines how individuals and institutions make decisions at all levels of disaster response, it is an introduction to current research pertaining to the sociological aspects of disaster, and it will provide increased awareness of the potential and difficulties in using social science research as a basis for modifying public policy.

FFP 2841 - Contingency Planning for the Private Sector

3 Credit Hours
(Offered as needed)

This course is designed to assist students in developing effective public sector plans by using the National Incident Management System and the Incident Command System templates. The curriculum includes case studies and development procedures for private sector logistics management and employee support planning.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

FRE 1121 - French II

4 Credit Hours
(Spring)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): FRE 1120 or an equivalent course with a grade of "C" or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

FS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2240L - Classical Cuisine

3 Credit Hours
(Fall)

Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures.

Prerequisite(s): FSS 1221L

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1214 - Business and Supervision Terminology

2 Credit Hours
(Fall)

This course is designed for students to achieve mastery of the special vocabulary, jargon, and concept terminology associated with general business and supervision in the modern workplace. Students will apply the terms in common workplace scenarios and hypothetical situations, as well as in standard written documents and assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 1942 - Internship Business

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2947 - Academic Learning Field Studies I

1 Credit Hour
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2948 - Academic Learning Field Studies II

2 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2949 - Academic Learning Field Studies III

3 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3930 - Business Project and Acquisitions Terms and Concepts

1 Credit Hour
(Fall)

Students will apply specialized terminology of project and acquisitions management in various communication venues including short written documents and summary analyses. Emphasis will be placed upon the latest terms, abbreviations and jargon applicable to the field. Students will research selected terms and concepts in various contemporary periodicals and publications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3933 - Business Research

1 Credit Hour
(Fall)

This seminar-style course, offered in group or individual format, provides an introduction to various references,

databases, periodicals, journals and other publications essential to the research of contemporary business issues; also included are methods of accessing resources via the Internet, designing search strategies, citing Internet resources and evaluating research materials.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4454 - Business in a High Technology Environment

3 Credit Hours
(Spring)

Presents the special challenges and opportunities of managing a high technology firm or a traditional entity operating in the high technology environment; addresses software/information security, recruiting technical personnel, outsourcing, equipment security, updating equipment, telecommuting and similar issues.

Prerequisite(s): upper division standing and GEB 3031 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4930 - Special Topics: Project Management

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4933 - Special Topics: Management

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4934 - Special Topics: Business Administration

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) from the area of business administration in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4941 - Internship: Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 2401 - GIS Applications in Social Science

3 Credit Hours
(Offered as Needed)

This course surveys the use of GIS for solving spatial problems in the social sciences. Examples from the fields of health, economic geography and real estate, housing, transportation, criminology, among others are used to illustrate how spatial techniques are used to address problems in a GIS environment. Special consideration will be given to the data needs of such operations, the implementation of methods in a GIS environment, and understanding the spatial assumptions and issues that underpin analyses.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth, tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

GLY 2601C - Introduction to Paleontology

4 Credit Hours
(Fall or Spring)

This course is a survey of prehistoric life. Topics include fossilization, systematics, evolution, ecology, extinction, and the geological history of life. Laboratory work covers the anatomy, classification, and ecology of major phyla of both extinct and extant organisms, including monerans, protists, plant, macroinvertebrates, and vertebrate animals. The course involves local and regional fossil collecting trips.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2141C - Multimedia II

4 Credit Hours
(Offered as needed)

An advanced course covering principles of design and information architecture surrounding interactive multimedia presentations. Students will learn an industry standard interactive DVD media authoring software application. Students will produce a finished interactive DVD.

Prerequisite(s): GRA 2140C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2900 - Independent Study – Graphic Art

1 Credit Hour
(Offered as needed)

This course covers the practical treatment of Graphics/Printing Technology. Emphasis is on individual work projects.

Prerequisite(s): GRA 1151C or PGY 1801C

GRA 2905 - Independent Study – Graphic Design

1 Credit Hour
(Offered as needed)

The student will initiate independent computer related work, utilizing various software and hardware. The course may be taken four times for credit.

Prerequisite(s): GRA 1151C or PGY 1801C

▲Technology-Across-the-Curriculum Course.

GRA 2941A - Internship, Graphic Design

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C and permission of the instructor.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2600 - Hospitality Law

3 Credit Hours
(Offered as needed)

Nature and function of our legal system as it applies to the operation of an INN. Innkeeper-guest relationship, contracts, torts, civil rights and insurable risks are emphasized.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2941 - Hospitality Internship

2 Credit Hours
(Offered Fall, Spring, Summer)

This course consists of on-the-job experience supplied by the hotel-motel-resort- restaurant industries. Job placement will be dependent upon the availability of participating hospitality institutions. The course consists of 60 hours per semester of on-the-job instruction accompanied

by a seminar class.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1432 - Pathopharmacology

3 Credit Hours
(Fall)

Introduction to the nature, cause, and treatment of disease entities and the body's defense mechanisms. Commonly used drugs will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1442 - Pharmacology for HIM Professionals

2 Credit Hours
(Offered as needed)

Pharmacology for HIM Professionals provides an overview of the pronunciation, spelling, actions and side effects of the most commonly prescribed medications. The course will examine pharmacological terms, abbreviations, and symbols used by healthcare providers to write prescriptions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2253 - CPT Coding - Part 1

3 Credit Hours
(Spring)

Instruction and practice in basic CPT coding conventions, principles of classifying physician services using current procedural terminology (CPT-4), APC, and auditing procedures. Ethical standards of practice will be analyzed.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

(Previously listed as HIM1253)

HIM 2272 - Healthcare Reimbursement

3 Credit Hours
(Summer)

Emphasis on billing regulations for the State of Florida. Course content includes LMRPS, Workers' Compensation laws, Florida Medicare, and claims for automobile accident injuries.

Prerequisite(s): HIM 2253 and HIM 2724 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2291 - CPT Coding Part 2

3 Credit Hours
(Spring)

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, inpatient and outpatient prospective payment systems, encoding software and RBRVs.

Prerequisite(s): HIM 2253 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2724 - ICD Coding Part 1

3 Credit Hours
(Fall)

This course provides a foundation using ICD-10-CM/PCS coding conventions, rules, methodology and sequencing, data sets, documentation requirements, and coding resources.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

HIM 2729 - ICD Coding Part 2

3 Credit Hours
(Fall)

This course focuses on assigning appropriate ICD, DRG, and Level II (HCPCS) codes to a wide range of original source medical documents. This course increases the quality of code selection by applying the decision process in problem solving using well-defined medical record review methods and guidelines. Ethical practices will be discussed.

Prerequisite(s): HIM 2724 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2815C - Professional Practice Experience

3 Credit Hours
(Summer)

Working in a simulated, online environment, students will endeavor to code and bill using nationally recognized, American Health Information Management Association (AHIMA) simulation software.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

HIM 2931C - Special Topics in Health Information Technology

1 Credit Hour
(Summer)

This course is a review of skills and work processes to support classification and coding to become nationally certified in-field. Effective test-taking strategies for certification exams and employability skills will be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HSA 1100 - Introduction to Health Care

3 Credit Hours
(Fall)

This course provides an overview of the United States Healthcare System, including the economic, social, political, and technological forces that shape the industry. The role of state and federal government and regulatory agencies in healthcare delivery is examined. The fundamental roles and responsibilities of healthcare team members are surveyed. Healthcare safety, security, and infection control procedures will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3110 - Health Care Organization and Management

3 Credit Hours
(Spring)

This course focuses on the structure and management of health care organizations, and the fundamental issues facing the U.S. health care system. Key topics include health status, the organization of health services, manpower, public health, financing, facilities, utilization, quality, regulation, and national health policy.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3111 - Introduction to Health Care Management

3 Credit Hours
(Fall)

This course studies the administration, organization and delivery of health care in the United States. Topics to be examined include health care leadership, management, strategy, performance improvement, information technology, insurance, financial and human resources management, as well as ethical and legal concepts.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3113 - Contemporary Issues in Health Care

3 Credit Hours
(Spring)

This course is designed to introduce students to a range of issues related to health and health care in the United States. Course content will give students the opportunity to explore differing perspectives as they develop a deeper understanding of the issues and enhance their research and communication skills. The course will enable students to analyze and evaluate evidence regarding controversial issues. Students will develop and practice skills in formulating and writing well-informed, well-articulated arguments and reflections.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4191 - Health Information Systems

3 Credit Hours
(Fall)

This course focuses on the theories, concepts and principles of health information systems and development of critical thinking skills for use in practice/working in health care informatics. Current trends and issues in using, designing, and managing heath care information systems will be examined. Students, applying evidence-based knowledge, will analyze the design and implementation of health care information systems.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4922 - Capstone: Health Care Management

3 Credit Hours
(Spring)

This course integrates the information, skills, and abilities provided throughout the Health Administration Program in a capstone project. Students complete a project that demonstrates excellence by applying the knowledge gained from the core courses and materials studied throughout the program. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

Prerequisite(s): senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1905A - Independent Study – Arts and Humanities

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue nonscheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): approval from department chair, a passing score on the standardized placement test measuring

communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

HUM 2250 - Humanities – A Contemporary Perspective

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

This course is an integrated study of the artistic, cultural, philosophic, religious, social, and technological influences that shape modern western cultures in the modern era. The focus will begin with the 20th century and follow, chronologically, the issues of the modern era. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2700 - Humanities – Foreign Study

3 Credit Hours ❖ ¶
(Offered as needed)

A variable humanities content course designed to allow students first-hand learning experiences outside the United States. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2920 - Humanities Colloquium

1 Credit Hour
(Fall, Spring, Summer)

Humanities Colloquium is a lab designed to introduce students to critical visual and listening skills to become an intelligent arts consumer. Initial lecture sessions are devoted to discussions of the elements of analysis of art works, music pieces, theater performances, and dance presentations. Students will be required to attend selected NWFSC Visual and Performance Arts presentations and to write a short critical review of each. Topics may vary.

Prerequisite(s): placement test may be required.

HUM 2930 - Humanities – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

HUS 4950 - Capstone: Human Resources Management

3 Credit Hours
(Spring)

This capstone will build upon and integrate the primary human resource management skills introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge in the field of human resources.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

IDS 2220 - Issues in Science and Religion

3 Credit Hours
(Fall, Spring, Summer)

This course will explore and relate scientific and religious conceptions of the natural world. Survey of major scientific discoveries and theories that both challenge and inform religious belief (including Big Bang cosmology, geologic time, evolutionary biology and paleontology, and Earth systems/global change). Survey of the historic role of religion and religious cosmologies in the rise of science, types of religious experience, concepts of God and divine action, the idea of the sacred as the ground for meaning in nature, natural theology and theology of nature, intelligent design, varieties of creationism, and various metascientific proposals (Anthropic Principle, Gaia Hypothesis, Biophylia, Deep Ecology). Emphasis is placed on integrating and harmonizing scientific and religious understandings to develop a more meaningful and informative, contemporary worldview.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ISC 1003 - Natural Disasters – Causes, Consequences, Human Response

3 Credit Hours
(Fall, Spring, Summer)

This interdisciplinary course investigates natural catastrophic events, such as earthquakes, volcanic eruptions, tsunamis, hurricanes and floods. This class will use an environmental studies approach to examine how modern society exacerbates the damage caused by these natural phenomena and methods to mitigate human suffering. The student will gain an appreciation of humankind's relationship to the natural environment.

ISC 4145 - Environmental Systems

3 Credit Hours
(Offered as needed)

Environmental Systems will expose students to a broad overview of the structure and processes occurring on Earth. Students will gain a broad understanding of the interactions between the atmosphere, biosphere, lithosphere, and hydrosphere. Course topics will be related to current environmental issues and our local ecosystems. This course is focused on Earth System Science content with development of methods specific to teaching middle school science as a secondary objective.

Prerequisite(s): (1) any two-course laboratory sequence in the natural sciences (i.e., Principles of Biology I & II, Principles of Geology I & II, College Chemistry I & II, Physics I & II, College Physics I & II, Anatomy & Physiology I & II); (2) any GLY course; (3) and either CHM1020 (Chemical Science) or PHY1020 (Physical Science).

ISM 3220 - Network Technologies for Information Professionals

3 Credit Hours
(Fall)

This course is designed to give the student an understanding of the various networking technologies and their practical application in the management of a business. The course also covers the technical issues involved in designing and implementing an efficient network for voice, data, and information networks.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3232 - Software Essentials

3 Credit Hours
(Fall)

This course covers a broad range of software topics as they apply to software management and systems analysis and design. Topics include, but are not limited to programming, the systems development life cycle (SDLC), systems management, interface design and Internet technology.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3323 - Applications in Information Security

3 Credit Hours
(Spring)

This course helps develop the important security concepts relative to software application development and access control that provide the knowledge and skills necessary for the successful management of information security in an organization. Students will understand the environment where software is designed and developed as well as the critical role software plays in providing security to an organization's information systems. The course focuses on software development concepts that relate to security, and how access control methodologies fit into the entire enterprise architecture.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4480 - Electronic Commerce Systems and Strategies

3 Credit Hours
(Offered as needed)

This course is designed to familiarize the student with the management approach to defining and implementing e-commerce (EC) systems. The course addresses the digital economy, EC strategy and marketing, EC models (Business to Business, Business to Consumer, etc.) as well as EC architectures. The course will cover management and regulatory issues in EC such as internationalization, electronic payment methods, Internet fraud, mobile e-commerce, and current implementation technologies. Architectures and inter-dependence (i.e. integration) of systems will be covered.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4930 - Special Topics - Technology Management

3 Credit Hours
(Offered as needed)

This is an individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): Upper division standing and permission of instructor.

This course may be taken up to two times for credit.

ISM 4931 - Internship - Technology Management

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): upper division standing and permission of instructor.

ISS 1905 - Independent Study – Social Science

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of students interested in a specialized area of the social sciences for which present course availability is limited.

This course may be taken up to four times for credit.

LAE 4343C - Writing Across the Curriculum

3 Credit Hours
(Offered as needed)

This course prepares pre-service teachers by developing an understanding of the foundations of writing through the use of writers workshops and instructional strategies necessary to provide adequate instruction to emergent, novice, and transitional writers. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

LEI 1544 - Outdoor Recreation Management

3 Credit Hours
(Fall, Spring)

This course examines the fundamental influences on outdoor recreation. The course also provides information on hazards, conservation considerations, and safety factors in planning and organizing outdoor recreations. Basic first aid, CPR, and AED training is incorporated as it pertains to outdoor recreation. Field trips may be assigned as warranted.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

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¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2100 - World Literature I

3 Credit Hours ❖ ¶
(Fall)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from antiquity through the Renaissance, that reflect cultural and intellectual heritage. May be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet the Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2120 - World Literature II

3 Credit Hours ❖ ¶
(Spring)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from the Renaissance to the present, that reflect cultural and intellectual heritage. May be used as a humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: LIT 2100 is not a prerequisite for this course)

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105L - College Algebra Lab

1 Credit Hour
(Fall, Spring, Summer)

A hands-on lab designed to improve students' success rates in the MAC 1105 - College Algebra course. Students will work on all topics covered in MAC 1105. Emphasis will be placed on strengthening algebraic skills through a variety of nontraditional approaches to learning, including small group collaboration and computer-based interactive learning. Meets specific general education requirements. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement scores

Corequisite(s): MAC 1105.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of "C" or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of "C" or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

MAD 3107 - Applied Discrete Mathematics

3 Credit Hours
(Fall)

This course builds on the foundation established in Introduction to Discrete Mathematics with further exploration in logic, mathematical reasoning, and mathematical proof writing. Topics include logic, set theory, boolean algebra, combinatorics, and graph theory with applications.

Prerequisite(s): Completion of MAC 2312 with a grade of “C” or better or concurrent enrollment in MAC 2312.

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4312C - How Children Learn Math

3 Credit Hours
(Offered as needed)

This course is designed to develop the skills and concepts necessary to deliver the mathematics curriculum effectively in the classroom. The content strongly reflects the curriculum emphases of the National Council of Teacher of Mathematics, and topics are presented using a process-oriented approach. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4930C - Seminar in Math Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in mathematics, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4940C - Teaching Methods in Middle Grades Math Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4945 - Internship - Middle Grades Math

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Math in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430 , EDG 3410C, EDG 3343, EEX 3070, EME 3410C, MAC 2312, MAD 3107, MAE 3350C , MAE 4312C, MAE 4940C , MHF 4404, MTG 2206, RED 3324C, RED 3335C, STA 2023, and TSL 3081C

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3120 - Leadership and Group Dynamics

3 Credit Hours
(Spring)

An applied leadership course with a focus on case studies, projects and group interaction; includes theoretical background on group dynamics, small group behavior and motivation, power, types of groups, verbal and non-verbal communication skills and team-building. Emphasis will be placed on sociological and psychological dimensions of inter-group relations, including analysis and problem-solving through simulations, cases and similar activities which reflect a general business perspective, as well as leadership and group dynamics across a variety of business units/functions.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and MAN 3052, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3294 - Strategy and Innovation

3 Credit Hours
(Offered as needed)

This course explores the concepts and tools used by businesses to create and sustain competitive advantage under dynamic market conditions. Topics will include strategy formulation, understanding core capabilities, examining external competitive forces and evaluating goals. Emphasis will also be placed on understanding the process of innovation and challenges faced by innovative organizations.

Prerequisite(s): Upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3310 - Issues in Human Resource Management

3 Credit Hours
(Fall)

Introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. Approach will focus on current issues and applications.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3320 - Employee Staffing and Benefits

3 Credit Hours
(Fall)

An intermediate level course in employment staffing issues focusing on staffing patterns, organizational structures, job analysis and design, staffing efficiencies, employee assistance programs, staff projection models, and employee services.

Prerequisite(s): upper division standing and MAN 3310 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3350 - Training and Development

3 Credit Hours
(Fall)

Covers various staff training and development models, effective workshop techniques, designing and implementing company-wide training and development programs. Assessment of training needs, training and development as a benefit and setting development goals; students will design and conduct at least one workshop/training session for fellow students.

Prerequisite(s): upper division standing and GEB 3213 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3505 - Production Operations and Logistics Management

3 Credit Hours
(Spring)

This course examines the integration of production operations and logistics management and how this enables an organization to compete successfully in business. Special emphasis is placed on the relationships that exist between operations and the supply chain to include operations and supply chain strategies, business processes, project management, product design and development, and inventory management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3574 - Acquisition Management

3 Credit Hours
(Spring)

Students will be exposed to the fundamentals of government acquisitions. This course provides conceptual material on government acquisitions, to include program planning, execution, and control. Students will be introduced to the elements of program risk and learn risk management techniques. The systems engineering process will be emphasized to include work breakdown structures, cost -- benefit analysis, and scheduling.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3610 - Global Logistics Management

3 Credit Hours
(Offered as Needed)

Examines selected industrial relations systems of Western Europe, Asia and the Americas, with special emphasis on differences among systems and the reasons such differences exist. The industrial relations significance of the multinational enterprise and management problems associated with operations in diverse systems are analyzed.

Prerequisite(s): Upper division standing and MAN 3593 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3786 - Sustainable Enterprise Planning

3 Credit Hours
(Offered as Needed)

This course introduces students to assessment tools, design and construction considerations, and operating planning requirements for sustainable enterprises. Students will learn about the ecological and economic benefits of sustainability/green practices. Additionally, they will learn how product, process, and service decisions affect sustainable enterprise concepts. Today's enterprises focus on social and environmental challenges, marketing, supply chain decisions, recycling, reusing, reconditioning, and other product and service decisions in order to realize a competitive advantage. This course will focus on best practices, case studies, evolving trends, and experimental efforts regarding sustainable/green systems.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3903 - Operations Research

3 Credit Hours
(Fall)

Operations Research is a science of modeling and optimization. It allows to model real-world problems by using mathematics, statistics and computers. It provides us the tools and theories to solve real-world problems by finding the optimal solutions to models subject to constraints of time, labor, resource, materials and business rules. With Operations Research, people make intelligent decisions to develop and manage their processes and businesses.

Prerequisite(s): Upper division standing is required. STA 2023, MAC 1140, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4162 - Customer Relations for Managers

3 Credit Hours
(Offered as needed)

This course focuses on relationship building for all customers of an organization. The impact of culture and diversity on business relationships, successful negotiation strategies, and promotion of the organization through media relations are discussed. Emphasis is placed on the manager's role in improving customer relationships by creating a customer-focused, organizational climate.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4401 - Labor Relations

3 Credit Hours
(Offered as needed)

This course explores the impact of employee organizations on labor relations, current problems, conflicts and trends and includes the development of managerial approaches to achieve labor management cooperation.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4520 - Quality Management

3 Credit Hours
(Spring)

This course examines the significance of quality as a primary competitive strategy for tomorrow's successful business organizations. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations functions. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, field trips and outside speakers. The students are expected to gain insight and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management. This course is appropriate for students who have an interest in: (1) managing the total quality program in a business organization, and/or (2) working for a business organization which already made a strong commitment to total quality management.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4555 - Quality Certification: ISO 9000

3 Credit Hours
(Fall)

A comprehensive study of internationally uniform quality standards (ISO 9000 and the steps to individual and organizational certification; includes management responsibility, quality system documentation, contract review, design control, process control, inspection and testing, corrective actions and other certification topics.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4570 - Purchasing and Materials Management

3 Credit Hours
(Fall)

The management of purchasing and the materials for production processes. Cost/price analysis, computer systems, forecasting, materials requirements, negotiations, and contracting are included.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4594 - Reverse Logistics

3 Credit Hours
(Offered as Needed)

In this course forward-moving logistics is compared to reverse-moving logistics. Both goods and information are discussed. Topics include federal and state regulations, waste management, recycled materials, technology, financial controls, stakeholders, and performance measurement.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4595 - Logistics Technology

3 Credit Hours
(Offered as Needed)

This course provides an overview of the use of technology (bar codes, gps, and radio frequency identification tags) in logistics to control recalls, returns, recycling, and waste management. Management functions, data synchronization, and interrelationships between different technologies to capture data regarding products moving in a logistics system are also discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4930 - Capstone: Acquisition Management

3 Credit Hours
(Spring)

In this seminar, students will have the opportunity to participate in hands-on projects applying the techniques in MAN 3574 - Acquisition Management. Emphasis will be on government acquisition management. Students will create a work-breakdown structure, a project schedule, and perform a cost-benefit analysis of alternatives. Earned value management will be introduced as a method of program control. Students will also identify potential risk areas and suggest mitigation plans.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4932 - Contract Negotiations Seminar

3 Credit Hours
(Offered as needed)

This seminar will refine the negotiation skills of the student through the use of readings, class discussions, case analyses, and practical exercises. Students will be introduced to goals, objectives, and strategies, as well as using appropriate tactics and methods to achieve them. The course will also help students understand the role of communication, power, and personality in the negotiation process and facilitate them assessing their personal abilities and traits as they relate to negotiation. While the course will focus on negotiation of defense-related contracts, the principles covered will apply to the entire range of interpersonal relationships.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4933 - Best-Value Source Selection Seminar

3 Credit Hours
(Offered as needed)

Focus is on the best-value source selection process. Students will walk through the acquisition cycle. Topics will include acquisition strategy, pre-solicitation activity, preparation for evaluation, initial proposal evaluation, discussions or negotiations, final proposal revision and recommendations and decisions.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4934 - Logistics Management Seminar

3 Credit Hours
(Offered as needed)

A special topics course conducted in group or individual format; focus is on the terms, concepts and processes associated with logistics and distribution in the contemporary business environment.

Prerequisite(s): upper division standing and MAN 3583 or MAN 3574. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4940 - Capstone: Supervision

3 Credit Hours
(Spring)

This capstone course will build upon and integrate the primary management skills and concepts introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge. This course will also cover basic entrepreneurial principles, which will be integrated throughout the student-led projects.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining core and emphasis business courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAS 2103 - Linear Algebra

3 Credit Hours
(Offered as needed)

This is an introductory course in Linear Algebra intended to give students enough insight to enable successful pursuit of more abstract mathematics courses. This course includes the study of matrices and systems of equations, determinants, vector spaces, linear transformations, orthogonality, eigenvalues, and eigenvectors. Exercises using MATLAB will be required. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade or “C” or better, or equivalent.

MAT 0018 - Developmental Mathematics I

3 College Prep Credits
(Offered as needed)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit (not applicable for degree completion). It is designed to reinforce the knowledge of operations and applications of fractions, decimals, percents, and signed numbers. An introduction to algebra will also be covered. Students must pass this class with a "C" or better to move on to MAT 0028.

Prerequisite(s): A score of 50-95 on the PERT.

Corequisite(s): SLS 1101.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0022 - Developmental Mathematics Combined

6 Credit Hours
(Fall, Spring, Summer)

A course designed to satisfy the requirements of both MAT0018 and MAT0028 in one semester and prepare students for MAT1033A. Topics to be studied include computations with decimals, percents, integers, operations with rational and polynomial expressions, linear equations and inequalities in one variable, factoring, and basic linear graphing. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. Due to the nature of this course, calculators are not permitted. A grade of "C" or better is required for successful completion of this course. College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

Prerequisite(s): score of 50-95 on the PERT

Prereq/Corequisites: SLS 1101

MAT 0028 - Developmental Mathematics II

4 College Prep Credits
(Fall, Spring, Summer)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit (not applicable for degree completion). This course emphasizes concepts, techniques, and applications of the following topics: operations with real numbers, linear equations and inequalities in one variable, rational expressions, properties of exponents, polynomials, radical expressions, and graphs of lines.

Prerequisite(s): Grade of "C" or better in MAT 0018 or score of 96-113 on the PERT or on an elective basis a score of 114 or higher on the PERT

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0056 - Developmental Mathematics Module

2 College Prep Credits
(Fall, Spring, Summer)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit. This course emphasizes concepts, techniques, and applications of the following topics: operations with real numbers, linear equations and inequalities in one variable, rational expressions; properties of exponents, polynomials, radical expressions, and graphs of lines. Student may exit Developmental Mathematics Module by passing the coursework and by obtaining a passing score on the Exit Exam.

Prerequisite(s): score of 105-109 on the PERT or elective basis score 110 or higher on the PERT

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0157 - Modularized Developmental Mathematics II

4 College Prep Credits
(Fall, Spring)

This course is designed to help students develop computational & algebra skills needed for success in college level mathematics. This course uses a modular format in a lecture/lab setting. Students will take a diagnostic test in class to identify skills that have not been mastered and to determine placement into the appropriate modules. Each student will have an individualized learning plan such that he or she works only on skills not yet mastered. Possible topics in the learning plan include operations on signed numbers, solving linear equations and inequalities in one variable, graphing linear equations, operations with exponents and polynomial expressions, factoring polynomials and solving quadratic equations, introduction to rational expressions, and operations with square roots. Students will use computerized instruction as well as guided instruction by the instructor. Successful completion of this course requires mastery of the material in each module and a passing score of the department final exam. Course cannot be used toward AA or AS degree.

Prerequisite(s): MAT 0018 with a grade of "C" or better or a score of 96-113 on the PERT.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MAT 1033L - Intermediate Algebra Laboratory

1 Credit Hour
(Fall, Spring, Summer)

A hands-on lab designed to improve students' chance for success in the MAT1033A Intermediate Algebra course. Students will work to strengthen skills required to master the topics covered in Intermediate Algebra. The topics

include, but are not limited to, factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions

Prerequisite(s): MAT 0028 or equivalent with a grade of "C" or better, or a score of 110-122 on the PERT, or on an elective basis with a score of 123 or higher on the PERT.

Corequisite(s): MAT 1033A

*Students scoring 110-113 on the PERT may enroll in MAT 1033A if they also enroll in MAT 1033L. Students should see an academic advisor.

MAT 2905 - Applied Teaching Techniques for Mathematics

4 Credit Hours
(Summer)

The goals of this course are: refinement or acquisition of mathematics skills and connections between mathematics topics needed for successfully tutoring in an academic setting; acquisition of general methods of tutoring as well as specific tutoring techniques needed for specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. Prerequisite: Consent of the department. A minimum grade of "C" is required.

Prerequisite(s): Admission to the BS Middle Grades Math degree program

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C"

is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites. Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MHF 4404 - History of Mathematics

3 Credit Hours
(Offered as needed)

This course is for students pursuing an education degree with an emphasis in middle school and secondary mathematics. This course covers the evolution of mathematics from early number systems through modern mathematics. If used to meet NWFSC Teacher Education program requirements, this course requires a grade of "C" or better.

Prerequisite(s): Completion of MAC 2311 with a grade of "C" or better or concurrent enrollment in MAC 2311.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1346 - Supervision II

3 Credit Hours
(Offered as needed)

The course presents a continuing study of the functions of a personnel manager, philosophy of general management, employee socioeconomic climate and other information. Included are orientation, training, labor unions, safety, health and other related topics.

Prerequisite(s): MNA 1345 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2141 - Leadership Techniques

3 Credit Hours
(Offered as needed)

This interdisciplinary course addresses leadership in a group setting and focuses on leadership development through discussion, readings, group and individual projects and other applied activities.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 1001 - Foundations of Officership

1 Credit Hour
(Fall)

This course examines the unique duties and responsibilities of officers, organization and role of the Army, reviews skills pertaining to fitness and communication, and analyzes Army values and expected ethical behavior. Requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 1002 - Basic Leadership

1 Credit Hour
(Spring)

This course presents fundamental leadership concepts and doctrine, the practice of basic skills that underlie effective problem solving, and examines the officer experience. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 2101 - Individual Leadership Studies

2 Credit Hours
(Fall)

This course develops knowledge of self-confidence and individual leadership skills. It develops problem solving and critical thinking skills, as well as how to apply communication, feedback, and conflict resolution skills. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour

physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 2102 - Leadership and Teamwork

2 Credit Hours
(Spring)

This course focuses on self-development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 3201 - Adaptive Team Leadership

3 Credit Hours
(Fall)

Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3202 - Leadership in Changing Environments

3 Credit Hours
(Spring)

Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, and apply principles and techniques of effective written and oral communication.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3203 - The Joint Environment

3 Credit Hours
(Offered as Needed)

Provides an introduction to the joint military environment. The course provides an overview of the development of national and regional policy through the national Security Council and national security system.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4301 - Developing Adaptive Leaders

3 Credit Hours
(Fall)

Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply

leadership and problem solving principles to a complex case study/simulation.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4302 - Leadership in a Complex World

3 Credit Hours
(Spring)

Capstone course to explore topics relevant to second lieutenants entering the army, describe legal aspects of decision making and leadership, analyze army organization from tactical to strategic level.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

MUH 2930 - Music Humanities – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUM 1620 - Audio and Acoustic Fundamentals

3 Credit Hours
(Fall, Spring, Summer)

Audio and Acoustic Fundamentals explores the basics of audio systems and equipment and the acoustical environment in which they are used. Emphasis is placed on equipment terminology, function and acoustical listening. The two basic fundamentals are summed together to begin laying the basic foundation required to operate audio and recording equipment.

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

MUN 1000 - Summer Ensemble Workshop

3 Credit Hours
(Summer)

An ensemble workshop open to any student who desires to improve vocal and physical presentation skills. A variety of musical physical styles will be studied and performed. Students participating in Summer Ensemble Workshop will be expected to participate in several scheduled performances.

Prerequisite(s): experience in high school or a desire to learn.

MUN 1001 - Summer Ensemble Workshop II

3 Credit Hours
(Summer)

An ensemble workshop and performance to improve vocal and physical presentation skills. A variety of musical physical styles will be studied and performed. Students participating in Summer Ensemble Workshop II will be expected to participate in several scheduled performances.

Prerequisite(s): MUN 1000.

MUN 1002 - Summer Ensemble Workshop III

3 Credit Hours
(Summer)

An ensemble workshop open to any student who desires to improve vocal and physical presentation skills. A variety of musical physical styles will be studied. Students participating in Summer Ensemble Workshop will be expected to

participate in several scheduled performances.

Prerequisite(s): MUN 1000, MUN 1001.

MUN 1140C - Wind Ensemble I

1 Credit Hour
(Fall, Spring)

An instrumental ensemble providing an outlet and learning experience to study and perform standard wind band literature, to improve individual instrumental skills, and to sharpen ensemble techniques. The Wind Ensemble performs in both on and off campus venues.

Prerequisite(s): experience in high school or community band programs.

This course may be taken up to four times for credit.

MUN 1310 - Women's Ensemble

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student having experience in reading music. A variety of musical styles will be studied and performed. Students electing NWFSC Chorus will be expected to participate in scheduled performances.

Prerequisite(s): Experience in high school choruses or choirs.

This course may be taken up to four times for credit.

MUN 1340A - NWFSC Show Choir I

1 Credit Hour
(Fall, Spring)

A study of the fundamental techniques and principles of integrating dance, voice, music and acting into a performance show choir. Training in voice, jazz movement, character interpretation and personality presentation is covered. Membership is open to all part-time or full-time students on a credit or audit basis. All music majors and performance majors must participate. The show choir appears in public performances at frequent intervals throughout the year.

Prerequisite(s): Audition, consent of department, music or performance minor.

This course may be taken up to four times for credit.

MUN 1360 - Madrigal Singers I

1 Credit Hour
(Offered Fall, Spring)

Auditioned a cappella ensemble teaching choral styles that range from the Renaissance madrigal to present day,

such as vocal jazz, spirituals and contemporary choral works. This course if for the "first year" student.

Prerequisite(s): Audition based on vocal quality, musicianship and sight reading ability.

This course may be taken up to four times for credit.

MUN 1390 - Symphony Chorale I

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student. The Symphonic Chorus will study and perform literature for the large sized chorus.

Prerequisite(s): audition or permission of instructor.

This course may be taken up to four times for credit.

MUN 1421 - Flute Ensemble

1 Credit Hour
(Fall, Spring)

The study and performance of flute ensemble and flute choir music in a musical group.

Prerequisite(s): audition or instructor recommendation only.

This course may be taken up to four times for credit.

MUN 1710A - Rock and Jazz Ensembles I

1 Credit Hour
(Fall, Spring)

Music performing organization open to any student who wants to develop his or her performance repertoire. Laboratory studies include techniques of performing music, literature, practices, styles and media applicable to designated organized ensemble.

Prerequisite(s): Some experience in high school bands, etc.

This course may be taken up to four times for credit.

MUN 1720A - Rock and Jazz Ensembles II

1 Credit Hour
(Fall, Spring)

Music performing organization open to any student who wants to develop his/her performance repertoire. Laboratory studies include techniques of performing music, literature, practices, styles and media applicable to designated organized ensemble.

Prerequisite(s): experience in high school bands.

This course may be taken up to four times for credit.

MUN 2141C - Wind Ensemble II

1 Credit Hour
(Fall, Spring)

An instrumental ensemble providing an outlet and learning experience to study and perform standard wind band literature, to improve individual instrumental skills, and to sharpen ensemble techniques. The Wind Ensemble performs in both on and off campus venues.

Prerequisite(s): experience in high school or community band programs.

This course may be taken up to four times for credit.

MUN 2311 - Women's Ensemble II

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student having experience in reading music. A variety of musical styles will be studied and performed. Students electing Women's Ensemble will be expected to participate in scheduled performances.

Prerequisite(s): MUN 1310

This course may be taken up to four times for credit.

MUN 2361 - Madrigal Singers II

1 Credit Hour
(Fall, Spring)

Auditioned a cappella ensemble teaching choral styles that range from the Renaissance madrigal to present day, such as vocal jazz, spirituals and contemporary choral works. This course is for the "second year" student.

Prerequisite(s): MUN 1360.

This course may be taken up to four times for credit.

MUN 2371 - NWFSC Show Choir II

1 Credit Hour
(Fall, Spring)

A study of the fundamental techniques and principles of integrating dance, voice, music and acting into a performance show choir. Training in voice, jazz movement, character interpretation and personality presentation is covered. Membership is open to all part-time or full-time students on a credit or audit basis. All music majors and performance majors must participate. The show choir appears in public performances at frequent intervals throughout the year.

Prerequisite(s): MUN 1340A.

This course may be taken up to four times for credit.

MUN 2392 - Symphony Chorale II

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student. The Symphony Chorus will study and perform literature for the large sized chorus.

Prerequisite(s): MUN 1390.

This course may be taken up to four times for credit.

MUS 1905A - Independent Study – Music

1 Credit Hour
(Offered as needed)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of “C” is also required.

Prerequisite(s): Approval from department chair, a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

MUS 2930 - Music – Special Topics

3 Credit Hours
(Fall, Spring)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

*This course may be taken up to four times for credit.

MUT 1001 - Fundamentals of Music

3 Credit Hours
(Fall, Spring, Summer)

A pre-theory course for the music major, non-music major, or for the elementary education major.

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

MVB 1201 - Applied Music Secondary – Brass I

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For nonmusic majors and music majors.

This course may be taken up to four times for credit.

MVB 2202 - Applied Music Secondary – Brass II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For nonmusic majors and music majors.

Prerequisite(s): MVB 1201.

This course may be taken up to four times for credit.

MVK 1211 - Applied Music – Piano I

1 Credit Hour
(Fall, Spring)

Private instruction in piano, as secondary instrument, consisting of one half-hour lesson per week. Minimum of one hour daily practice is required.

This course may be taken up to four times for credit.

MVK 1311 - Applied Music - Piano I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in Piano in the freshman year of study as the student's principal performing medium. This one hour, weekly lesson is for intended piano majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which three-four memorized selections from standard literature will be required.

Prerequisite(s): MVK 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVK 2221 - Applied Music – Piano II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in piano, as a secondary instrument, consisting of one half-hour lesson per week. Minimum of one hour daily practice is required.

Prerequisite(s): MVK 1211.

This course may be taken up to four times for credit.

MVK 2321 - Applied Music - Piano II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in Piano in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended piano majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which a memorized sonata movement and three-four memorized selections from standard literature will be required.

Prerequisite(s): MVK 1211, MVK 1311 and Division Chair approval.

This course may be taken up to four times for credit.

MVP 1201 - Applied Music Secondary – Percussion I

1 Credit Hour
(Fall, Spring)

Private instruction in percussion instruments to develop the student's performance ability in an applied area. One half-hour private lesson per week. Minimum of one hour daily practice is required.

This course may be taken up to four times for credit.

MVP 2202 - Applied Music Secondary – Percussion II

1 Credit Hour
(Fall, Spring)

Private instruction in percussion instruments to develop the student's performance ability in an applied area. One half-hour private lesson per week. Minimum of one hour daily practice.

Prerequisite(s): MVP 1201.

This course may be taken up to four times for credit.

MVS 1016 - Applied Strings – Guitar I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction on guitar. Designed to equip the student for continuing study leading progressively to greater

proficiency.

This course may be taken up to four times for credit.

MVS 1017 - Applied Strings – Bass Guitar I

1 Credit Hour
(Fall, Spring)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

This course may be taken up to four times for credit.

MVS 1201 - Applied Music Secondary – Strings I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

This course may be taken up to four times for credit.

MVS 2026 - Applied Strings – Guitar II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

Prerequisite(s): MVS 1016.

This course may be taken up to four times for credit.

MVS 2027 - Applied Strings – Bass Guitar II

1 Credit Hour
(Fall, Spring)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

Prerequisite(s): MVS 1017.

This course may be taken up to four times for credit.

MVS 2202 - Applied Music Secondary – Strings II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

Prerequisite(s): MVS 1201.

This course may be taken up to four times for credit.

MVV 1211 - Applied Music – Voice I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour session per week, with a minimum of one hour daily practice.

This course may be taken up to four times for credit.

MVV 1311 - Applied Music - Voice I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in voice in the freshman year of study as the student's principal performing medium. This one hour weekly lesson is for intended voice majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which four memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVV 2221 - Applied Music – Voice II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour lesson per week, with a minimum of one hour daily practice.

Prerequisite(s): MVV 1211.

This course may be taken up to four times for credit.

MVV 2322 - Applied Music - Voice II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in voice in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended voice majors, and requires Division Chair Approval. A major component of this class is a required juried performance at the end of the semester for which six memorized selections from standard

literature will be required.

Prerequisite(s): MVV 1211, MVV 1311 and Division Chair approval.

This course may be taken up to four times for credit.

MVW 1201 - Applied Music Secondary – Woodwinds I

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

This course may be taken up to four times for credit.

MVW 2202 - Applied Music Secondary – Woodwinds II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

Prerequisite(s): MVW 1201.

This course may be taken up to four times for credit.

NSP 2049L - Nursing Practice Readiness

1 Credit Hour
(Fall, Spring)

This elective laboratory course assists the nursing student to prepare for the RN licensure examination (NCLEX-RN). Web-based instructional methodologies allow the student to complete the course within a self-paced time frame. Students practice test taking skills, self-evaluation and other strategies to gain confidence in sitting for the NCLEX-RN.

Prerequisite(s): NUR 2241C or permission from Nursing Program Director.

Special Nursing Program policies may apply to this course.

NSP 3640 - Nursing Care of Military and Veteran Populations

3 Credit Hours
(Spring)

This course is designed to identify the unique healthcare needs of military and veteran populations in the United States in order to prepare students and practicing nurses to develop competence in designing nursing interventions within civilian and government agencies in which military members and veterans seek healthcare. In accordance with the ANA's pledge (2012) to raise awareness of the unique conditions and needs of military veterans and their families, this course supports the Joining Forces initiative to further nursing training to include specialized topics such

as traumatic brain injury, posttraumatic stress disorder, trauma rehabilitation, and understanding the military and veteran's healthcare delivery system.

NSP 4275 - Introduction to Critical Care Nursing

3 Credit Hours
(Offered as Needed)

This course examines the needs of the critically ill client. As part of the human experience, the integrity of the individual and family may be disrupted by a critical illness. During such time, the critical care nurse assists the individual and family to restore life processes to a state of dynamic equilibrium. This course emphasizes the involvement through use of scientific rationale and application of the nursing process in providing care to the individual client and family. Critical care concepts and skills for promoting client and family well-being are stressed.

NSP 4625C - Transcultural Nursing Immersion Course

3 Credit Hours
(Offered as needed)

This course unfolds in two phases: a comprehensive Orientation and Education Phase (I) and a Population Service Phase (II). The two stages are designed to be synergistic in nature. Phase I helps students to develop a deeper appreciation for an underserved region of the world. Phase I will set the stage for the immersion and learning that will take place during Phase II when students will provide basic healthcare and health education to an instructor chosen underserved population in the world. Air and ground travel are required. Current/valid Florida Registered Nursing License, good health, and a clear Background Check/Drug Screen are required. An International Passport may be required. Expenses associated with the course are the responsibility of the student.

Prerequisite(s): Student must be a Registered Nurse and have a clear background check/drug screen.

NSP 4869 - The Professional Nurse Manager and Leader

3 Credit Hours
(Offered as needed)

This course outlines the roles and functions of nurses in executive practice using the competencies identified by the American Organization of Nurse Executives (AONE). Successful nurse leaders and managers exercise complex leadership responsibilities that directly affect the quality of patient and family care in today's multifaceted healthcare management systems. This course will address competencies in communication, knowledge of the healthcare environment, business skills and principles, and professionalism. The course content also provides a review of the material covered in the Certified Nurse Manager and Leader examination conducted by the American Organization of Nurse Executives Credentialing Center that is available to BSN prepared Registered Nurses.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 1021C - Nursing Process I

6 Credit Hours
(Fall, Spring)

This course introduces concepts and principles of holistic nursing care. Students will build on knowledge obtained in the biophysical and psycho-social sciences in this first of four required clinical nursing courses in the nursing curriculum. Theory content includes an introduction to healthcare systems ethical-legal aspects of nursing practice,

health and illness, communications, functional health patterns of clients, stress-adaptation, professional behaviors, and all steps of the nursing process with emphasis on assessment of older adult clients. Students begin socialization into the role of the Associate Degree Nurse as a member of an interdisciplinary healthcare team.

Prerequisite(s): Admission to the AS Nursing Program, BSC 1085C, ENC 1101, (MAC 1105 OR STA 2023)

Corequisite(s): NUR 1021L

Prereq/Corequisites: BSC 1086C, HUN 2201

Special Nursing Program policies may apply to this course.

NUR 1021L - Nursing Process I Clinical Experience

4 Credit Hours
(Fall, Spring)

This course introduces students to the role of the Associate Degree Nurse in providing direct, holistic nursing care to young, middle-aged and older adults who are hospitalized or in community settings. Students are introduced to all steps of the nursing process with a focus on assessment skills. Students will identify self-learning needs and set their own goals for improvement. Critical thinking and working effectively with peers and other healthcare professionals as a team member is expected. The demonstration of caring behaviors and therapeutic communication as a provider of bedside, technical nursing care is emphasized. Students must demonstrate safe performance of basic nursing skills, including but not limited to medication administration, physical assessment, and comfort care.

Prerequisite(s): Admission to the AS Nursing Program

Corequisite(s): NUR 1021C.

Special Nursing Program policies may apply to this course.

NUR 1141 - Pharmacologic Principles in Nursing I

1 Credit Hour
(Fall, Spring)

This course introduces students to concepts and principles of pharmacology related to safe administration of therapeutic agents within the nursing process framework. Students begin to learn major drug classifications and selected exemplars along with principles of safe, effective administration of drugs. Students will learn dosage calculations, factors that affect the absorption, excretion, distribution, and metabolism of drugs, as well as drug actions, adverse effects, and interactions.

Prerequisite(s): Admission to the AS Nursing Program

Special Nursing Program policies may apply to this course.

NUR 1142 - Pharmacologic Principles in Nursing II

1 Credit Hour
(Fall, Spring)

An introduction to the role of the associate degree nurse in providing direct, holistic nursing care to young, middle-aged and elderly adults who are hospitalized or receiving care in community settings. Emphasis is on applying all

steps of the nursing process with focus on assessment skills. Pre-requisite college foundation and nursing courses provide theoretical bases for nursing care. Critical thinking is an expected behavior along with skills in working ethically and effectively with peers and other health care professionals as a team member; demonstrate caring behaviors and therapeutic communication with clients as a provider of bedside, technical nursing care. The student is expected to demonstrate safe performance of basic nursing skills, e.g., medication administration, physical assessment and comfort care of hospitalized adults and nursing home residents.

Prerequisite(s): NUR 1141 or LPN licensure and admission to the Nursing Program

Corequisite(s): NUR 1231C and NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 1231C - Nursing Process II

5 Credit Hours
(Fall, Spring)

Application of the nursing process continues with emphasis on the planning and implementation of nursing care for clients experiencing threats to functional health patterns. Development of professional behaviors, such as developing therapeutic relationships continues with students working clients through life interactions. Students further develop critical thinking skills through case studies and simulation scenarios designed to provide students with problem solving skills in analyzing, planning and prioritizing care for clients whose health problems are more acute or chronic; the client with psycho-emotional dysfunctions, dysfunctional support systems situations, grief, and loss. Students learn basic management skills as a team member caring for a limited number of clients in hospitals with emphasis on coordination of nursing care and discharge planning. Conflict management skills are highlighted as the student increases role as client advocate.

Prerequisite(s): NUR 1021L NUR 1021C and NUR 1141;or LPN licensure; admission to the AS Nursing Program or permission from the program director

Corequisite(s): NUR 1750L and NUR 1142

Prereq/Corequisites: DEP 2004

Special Nursing Program policies may apply to this course.

NUR 1750L - Nursing Process II - Clinical Experience

4 Credit Hours
(Fall, Spring)

This course builds on competencies presented in Nursing Process I regarding the role of the Associate Degree Nurse in providing direct, holistic nursing care for adult clients experiencing dysfunctional health patterns. Clinical experiences in hospitals, clinics, and community settings provide students with opportunities to apply the nursing process in care of clients, including the older adult. Students continue to develop management skills through conflict management and other professional behaviors. Students demonstrate safe performance of all basic and more complex nursing skills.

Prerequisite(s): NUR 1021L or LPN licensure

Corequisite(s): NUR 1231C.

Special Nursing Program policies may apply to this course.

NUR 1940L - Nursing Clinical Externship

3 Credit Hours
(Summer)

This elective course is designed to offer students the opportunity to gain additional clinical skills practice during the summer semester. Working with a preceptor and the nursing faculty in area hospitals, clinics, or community settings , the student will be able to perform all skills learned in successfully completed nursing courses.

Prerequisite(s): admission to the AS Nursing Program; NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 2233C - Nursing Process III

6 Credit Hours
(Fall, Spring)

Students continue to use the nursing process and critical thinking with emphasis on primary and secondary prevention as nursing interventions in clients experiencing threats to functional health patterns, including during the childbearing process and children whose normal lines of defense have been invaded by stressors to the degree that hospitalization is necessary. Nursing practice issues continue to focus on ethical-legal issues related to acute and/or chronic illness and disability. Management skills include delegation and career development.

Prerequisite(s): NUR 1231C & NUR 1142 or approval from the program director.

Corequisite(s): NUR 2233L

Prereq/Corequisites: MCB 2010C

Special Nursing Program policies may apply to this course.

NUR 2233L - Nursing Process III – Clinical Experience

4 Credit Hours
(Fall, Spring)

Students continue to apply knowledge and skills learned in previous nursing courses in providing nursing care for the hospitalized child, the family during the maternity cycle, and adults whose health problems are more complex and/or chronic. Clinical sites include hospitals, health departments, clinics, physician offices, schools and other community settings. Conflict resolution skills are applied, as needed, to meet client and/or peer learning goals. Delegation skills with peers are also practiced. Students demonstrate continuation of all previously learned nursing skills and must perform safely all advanced nursing skills in this clinical course.

Prerequisite(s): NUR 1750L

Corequisite(s): NUR 2233C.

Special Nursing Program policies may apply to this course.

NUR 2241C - Nursing Process IV

5 Credit Hours
(Fall, Spring)

Students integrate knowledge and principles of the biophysical and psychosocial sciences to solve life-threatening problems that affect a limited number of critically ill clients in a variety of clinical settings. Students differentiate holistic nursing care therapies in primary, secondary and tertiary care settings. Students become proficient in applying all steps in the nursing process with emphasis on evaluating nursing care outcomes. Students apply critical thinking skills in exploring case-based practice situations and work together in simulation seminars to select effective client care improvement processes. Self-evaluation is part of the socialization process to prepare students for the work world as competent, caring staff nurses. Nursing practice issues include licensure standards and continued professional development.

Prerequisite(s): Permission from the Director of Nursing or NUR 2233C; MAC 1105 or STA 2023

Corequisite(s): NUR 2241L, NUR 2811L

Prereq/Corequisites: SYG 2000

Special Nursing program policies may apply to this course.

NUR 2241L - Nursing Process IV – Clinical Experience

3 Credit Hours
(Fall, Spring)

Students apply knowledge and principles of the biophysical and psychosocial sciences to assess, plan, implement and evaluate holistic nursing care of critically ill adults in hospitals, ambulatory care settings, and the home. Students will expand on management of care skills in preparation for their four-week clinical practicum prior to graduation from the program. Students will also shadow a home health/hospice nurse in observing treatment and palliative care of adults and children. Other clinical activities will include experiences in the emergency department and critical care units. Students must demonstrate competency in all behaviors required for an Associate Degree Nursing graduate.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2811L

Special Nursing Program policies may apply to this course.

NUR 2811L - Nursing Practicum

3 Credit Hours
(Fall, Spring)

This course is a capstone course and provides a time during the last four weeks of the nursing program in which students begin to transition from the student role into the graduate role as an associate degree nurse. Students attend seminar hours and complete standardized testing for evaluation in proficiency in applying all steps in the nursing process with emphasis on evaluating safe nursing care outcomes. Students complete clinical practice hours with an experienced registered nurse preceptor to provide holistic nursing care for a limited number of clients. The focus is on demonstration of all professional behaviors and competencies expected of the associate degree registered nurse graduate at entry level. Clinical experiences provide hands-on learning opportunities, enhancing clinical thinking, safe nursing judgment, and clinical confidence in skills. Clinical experiences take place in a variety

of clinical settings and work schedules.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2241L

Special Nursing Program policies may apply to this course.

NUR 2931 - Special Topics in Associate Degree Nursing

1 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2932 - Special Topics in Associate Degree Nursing

2 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2933 - Special Topics in Associate Degree Nursing

3 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2934 - Special Topics in Associate Degree Nursing

4 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in

meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2935 - Special Topics in Associate Degree Nursing

5 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 3067C - Health Assessment

3 Credit Hours
(Fall, Summer)

This course is designed to develop the student's knowledge for obtaining and recording a systematic, comprehensive health history, psychosocial assessment, and physical examination of the adult. The course involves the synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as they apply to the findings obtained in the comprehensive health assessment of clients of various ages. During the fieldwork experience, emphasis will be placed on collection of a database through physical assessment, history taking and interviewing.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3071 - Writing for Success in Nursing

1 Credit Hour
(Fall, Spring, Summer)

This course Is designed to develop the student's knowledge for writing at the upper division nursing level. The course includes information regarding use of APA format and scholarly writing resources.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 3080 - Dimensions of Baccalaureate Nursing Practice

3 Credit Hours
(Fall, Summer)

This course will provide Registered Nurses, who are returning to school to earn a Baccalaureate degree, an opportunity to advance professional practice concepts. As designed, the course engages the student intellectually in an ongoing professional dialogue and journey with peers, colleagues, and instructors that serves to broaden the student's professional development and builds on preexisting knowledge and experiences. The course curriculum is written for adult learners with the characteristics of self-direction, prior experience, applicability to practice, and motivation to meet the challenge to expand their knowledge base and to utilize advanced critical thinking skills.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3678 - Nursing Care of Vulnerable Populations

3 Credit Hours
(Offered as needed)

Caring for the vulnerable members of society is a function nurses perform without regard for their own ambitions, personal safety, and financial security. This course is designed to pull together material from different cultures and at risk groups of individuals considered vulnerable populations. Key concepts will be discussed that will provide a basic structure for caring for the vulnerable, the relevance of nursing theories to vulnerable populations, nursing research showing the kinds of phenomena nurses study, and many ideas about learning to work with and advocate for vulnerable individuals.

NUR 3767 - Nursing Care of Complex Clients

3 Credit Hours
(Spring)

This course assists the RN to BSN student in the assimilation of pathophysiology, assessment, and pharmacological nursing concepts with variety complex client issues. This course provides expanded concepts related to nursing care for individuals experiencing complex alterations in health problems as they progress through a variety of healthcare delivery systems and environments.

Prerequisite(s): NUR 3067C, NUR 3080.

NUR 3826 - Nursing Ethics

3 Credit Hours
(Offered as needed)

This course provides an in-depth exploration of ethical principles and moral reasoning as the foundation of nursing practice. The ANA Code of Ethics will be used as a framework for examining current issues in healthcare delivery across the age span from reproductive issues to end-of-life care.

Prerequisite(s): Must be an RN or ASN student.

NUR 3837 - Health Care Issues

2 Credit Hours
(Fall, Spring)

This course provides a forum for the exploration and evaluation of concerns germane to contemporary nursing. The focus of this course is on the nursing profession and current major issues and problems that concern it. Social forces influencing changes in the nursing profession are analyzed in terms of historical antecedents and their current manifestations. Recently passed, and pending legislature at both the national and state levels is emphasized.

Prerequisite(s): Current RN Licensure.

NUR 3955 - Portfolio I

1 Credit Hour
(Fall, Summer)

This course will provide RN to BSN students an opportunity to develop an electronic professional portfolio to express one's professional nursing expertise and proficiency.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 4125 - Clinical Pathophysiology

3 Credit Hours
(Fall, Spring)

This course examines in detail the underlying process involved in the development, evolution, manifestations, and complications of common clinical diseases across the life span, and compares normal and abnormal states. The biological bases for therapeutic clinical actions are examined.

Prerequisite(s): NUR 3067C

NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research

3 Credit Hours
(Fall, Spring)

This course is designed to provide the RN to BSN student with an introduction to the research process and evidence based practice. The purpose of the course is to stimulate interest in nursing research; to enable students to understand and judge the usefulness of scientific findings; and to develop an understanding of how clinical proficiency is combined with experimental proof to produce nursing practices based upon evidence. An on-line teaching method is used with optional workshops available to students.

Prerequisite(s): STA 2023.

NUR 4615C - Family and Community Health

5 Credit Hours
(Fall, Spring)

The Family and Community Health Nursing course is designed to facilitate the conceptualizing of family, population groups, and community as units of care from diverse cultures, ethnic, and social backgrounds. The student is provided a fieldwork opportunity to assess the health needs of selected families and groups in the community setting with selected health promotion, risk reduction, and disease prevention. The nursing process is used to examine multiple influences impacting life-course experiences of families and communities to enhance functioning.

Prerequisite(s): NUR 3067C, NUR 3080, admission to the BSN program and completion of all General Education requirements.

NUR 4827C - Nursing Leadership and Management

5 Credit Hours
(Spring, Summer)

This course provides students with an evidence-based study of leadership, collaboration, and coordination in healthcare settings. Students develop an evidence based paper to deal with key leadership and management issues related to professional goals. Nursing leadership and management fieldwork focuses on the roles and functions of the professional nurse in these roles. Issues associated with healthcare delivery are explored. Fieldwork provides an

opportunity to plan, implement and evaluate a change in the practice of nursing.

Prerequisite(s): NUR 3080,NUR 4165, NUR 3067C, NUR 4615C.

NUR 4956 - Portfolio II

1 Credit Hour
(Spring, Summer)

This course will provide students an opportunity to complete and evaluate their electronic professional portfolio to express their professional nursing expertise and proficiency.

Prerequisite(s): NUR 3955, NUR 3080; Pre or Corequisite: NUR 4827C.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

OCE 1013C - Aquatic Environmental Science

4 Credit Hours
(Offered as needed)

This course will investigate living and non-living components of aquatic ecosystems. Students will learn how aquatic ecosystems function naturally as well as how human activity can alter these ecosystems. The course is built around field trip(s) and lab work during which students will obtain water quality data from a local aquatic environment. Through field trip(s) and lab work, students will gain appreciation for the local relevance of course material. For both majors and non-majors, a key outcome of such experiences will be gaining experience in using inquiry and reasoning through the scientific method and becoming comfortable with data, technology, and instrumentation. Problem-solving, interpretation of data, and class discussions will be key.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PAD 3003 - Public Service Operations

3 Credit Hours
(Offered as Needed)

An introduction to public administration and policy in America. This course is designed to provide undergraduate students a basic understanding and appreciation of the administration of the public sector. It is intended to provide an overview of public administration for students interested in public service and for students, who as good citizens, want

an appreciation of the complexities of public management.

Prerequisite(s): upper division standing.

PAD 3393 - Advanced Emergency Management

3 Credit Hours
(Offered as needed)

This course examines functional demands that emergency managers should be aware of in crafting emergency management policies and programs. Students investigate how public policy choices impact emergency planning and the consequences of a disaster. It is designed to help the student develop an in-depth understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

Prerequisite(s): upper division standing.

PAD 3820 - Public Safety System Integration

3 Credit Hours
(Offered as needed)

This course compares and contrasts the various components of the public safety sector. The course examines the working relationship between public safety organizations and the effectiveness of the various service delivery models.

Prerequisite(s): upper division standing.

PAD 3874 - Community Relations

3 Credit Hours
(Offered as Needed)

This course will expose the student to community relations theory and practice within a broad range of public safety organizations. Students will understand why positive community perception of public safety is critical to funding and operational effectiveness. Students will explore the public safety responsibility in establishing business continuity both in preplanning and following a disaster. Each student will gain the insight and skills necessary to be effective in the community relations function of public safety administration.

PAD 3882 - Issues in Public Service Administration

3 Credit Hours
(Offered as Needed)

This course focuses on current issues and trends in the field of public service administration. The course is structured to introduce management and administrative topics in public service, examine the implications to the field, and reformulate recommendations. This course will begin developing skills in project design and presentation. This course will enhance critical thinking skills.

Prerequisite(s): upper division standing.

PAD 4878 - Capstone: Public Service

3 Credit Hours
(Offered as Needed)

This course provides an opportunity for the student to complete a professional project and apply information and skills studied in core and concentration program courses under the direction of the professor. Successful completion of the course requires demonstration of achievement of the program's learning outcomes. This course should be completed in the last term before graduation.

Prerequisite(s): upper division standing.

PAD 4933 - Special Topics in Public Administration

3 Credit Hours
(Offered as needed)

This is an individual or group course designed to provide students with the opportunity to pursue a special topic(s) from the area of public administration in depth; may be repeated as topics change.

Prerequisite(s): Upper division standing and permission of the instructor.

This course may be taken up to three times for credit.

PEL 1212A - Advanced Softball

1 Credit Hour
(Offered as needed)

Instruction, practice, and participation in advanced softball. The continuous development of physical skills is of major importance in this course.

PEL 1213 - Advanced Softball II

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Softball, which consists of instruction, practice, and participation in advanced softball. The continuous development of physical skills is of major importance in this course.

Prerequisite(s): PEL 1212A (Athletes)

PEL 1217A - Advanced Baseball

1 Credit Hour
(Offered as needed)

Instruction, practice, and participation in advanced baseball. The continuous development of physical skills is of major importance in this course.

PEL 1219 - Advanced Baseball II

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Baseball, which consists of instruction, practice, and participation in advanced baseball. The continuous development of physical skills is of major importance in this course.

Prerequisite(s): PEL 1217A (Athletes)

PEL 1624M - Advanced Basketball (Men)

1 Credit Hour
(Offered as needed)

This course is a high intensity, drill-oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

PEL 1624W - Advanced Basketball (Women)

1 Credit Hour
(Offered as needed)

This course is a high intensity, drill oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including: rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

PEL 1626M - Advanced Basketball II (Men)

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Basketball for Men, which consists of a high intensity, drill -oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

Prerequisite(s): PEL 1624M (Athletes)

PEL 1626W - Advanced Basketball II (Women)

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Basketball for Women, which consists of a high intensity, drill -oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball.

Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

Prerequisite(s): PEL 1624W (Athletes)

PEM 1131A - Strength Training

3 Credit Hours
(Offered as needed)

This course is a high intensity lecture/demonstration and flexible lab hour weight training program designed to increase the size, strength, and endurance of the skeletal muscle system. Instruction includes, but is not limited to, weight training safety, etiquette, history, and nutrition. Instruction will be given in the design of progressive resistance programs to increase total body efficiency and to meet the objectives of the individual student. Students are responsible for determining fitness for training, and those with medical problems which restrict personal activities are encouraged to obtain medical clearance before enrolling in the course.

PEM 2108 - Fitness Lab

1 Credit Hour
(Offered as needed)

Instruction and participation in an exercise program with emphasis on muscle endurance, strength and flexibility.

Prerequisite(s): HLP 1081 or approved wellness assessment by the department chair.

This course may be taken up to four times for credit.

PEO 2004 - Theory and Practice of Teaching a Specific Sport

3 Credit Hours
(Offered as needed)

This course is designed to provide knowledge of the rules, teaching progressions and strategies for competition. The course includes acceptable behavior and ethics for coaches. This course will be offered for the following specific sports: baseball/softball, basketball, football, golf, soccer, swimming, tennis, track and field/cross country, volleyball and wrestling.

PEO 2005 - Coaching Theory

3 Credit Hours
(Offered as needed)

This course is designed to provide knowledge of the characteristics, principles, ethics, and theories related to coaching sports in educational and recreational settings. Emphasis is placed on preparing coaches to train athletes to achieve optimal levels of performance.

PET 1000 - Introduction to Physical Education

3 Credit Hours
(Offered as needed)

A study of the history of physical education and sport with particular emphasis placed on present practices and trends.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 1401C - Basic Photography

3 Credit Hours
(Fall, Spring)

A beginning course in black and white photographic and darkroom technique. Students will learn the functions of their camera and darkroom equipment. Students will apply their technical knowledge to various artistic challenges. Access to a 35mm camera with manual mode required.

PGY 1405C - Advanced Black and White Photography

3 Credit Hours
(Fall, Spring)

An advanced course in black and white photography. Students will be presented with more demanding creative challenges and will be exposed to a variety of advanced procedures in the darkroom. Access to a 35mm camera with manual mode required.

Prerequisite(s): PGY 1401C or equivalent.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an

appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

PGY 2221C - Commercial Photography II

4 Credit Hours
(Offered as needed)

As advanced a course that allows the student to expand their skill set in producing photographic illustrations for industrial and advertising use. Students may explore product, portrait, and on-location commercial photographic projects.

Prerequisite(s): PGY 1220C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2804C - Digital Photography III

4 Credit Hours
(Offered as needed)

An advanced-level photography courses where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 2802C.

▲Technology-Across-the-Curriculum Course.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2930 - Philosophy – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

PLA 1003 - Introduction to Paralegal Studies

3 Credit Hours
(Fall)

This course is designed to give students a broad understanding of the nature of the paralegal profession and the elements contained within the profession, as well as its responsibility.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1114 - Legal Research and Writing

3 Credit Hours
(Spring)

This course is designed to provide the student with necessary skills and knowledge required in legal research/case analysis and legal writing.

Prerequisite(s): PLA 1003 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1600 - Wills, Trusts, and Probate

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of estate planning, wills, and probate administration.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2273 - Tort Law

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of tort law with objectives centered on personal injury torts.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2949 - Internship - Paralegal

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college

instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): completion of a minimum of 12 credit hours in the appropriate discipline, including PLA 1003 and permission of the instructor is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

*This college credit course is not intended for transfer and may not be applied toward the AA degree.

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

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PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides instruction and demonstration using Shielded Metal Arc Welding (SMAW). Topics include visually inspect of welds, and basic SMAW technical terminology. Basic structural welding techniques will be demonstrated in accordance with American Welding Society (AWS) D1.1 Structural Welding Code. Tack welding and metal joint fit of carbon steel is covered in this course.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course introduces structural fillet welds in different joint positions in accordance with AWS D1.1 Structural Welding Code. Fillet welds will be performed on carbon steel plate of various thicknesses.

Prerequisite(s): PMT 0121C

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PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides the student with instruction on joint design, joint preparation, and fit-up, and performance of groove welds with backing. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds with backing and make acceptable groove welds with backing using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0122C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Spring, Summer)

This course provides the student with advanced instruction on joint design, joint preparation, and fit-up, and performance of open groove welds. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of open groove welds and make acceptable open groove welds in all positions using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0126C

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awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0134C - Gas Metal Arc Welding (GMAW)

50 Clock Hours
(Spring, Summer)

This course provides instruction and demonstration using the various transfer methods and techniques of Gas Metal Arc Welding (GMAW). Topics included are safety, equipment set-up, joint design and preparation, and gases.

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PMT 0145C - Flux-Core Arc Welding (FCAW)

240 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Flux-Core Arc Welding (FCAW) and basic understanding of pipe welding. Welding symbols and blueprint reading are covered in this course.

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PMT 0155C - Gas Tungsten Arc Welding (GTAW)

160 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to gas tungsten arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Gas Tungsten Arc Welding (GTAW), and basic understanding of pipe welding.

PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding

200 Clock Hours
(Offered as needed)

This course introduces the student to the practices and procedures of welding carbon steel pipe using the Shielded Metal Arc Weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation and fit-up. Upon completion, students should be able to demonstrate pipe positions, proper electrodes

selection, proper joint geometry, joint preparation, fit-up, and proper SMAW pipe welding techniques in accordance with applicable codes.

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PMT 0171C - SMAW-GTAW Pipe Welding

400 Clock Hours
(Offered as needed)

This course is designed to provide the students with skills in welding carbon steel pipe using Shielded Metal Arc Weld process and Gas Tungsten Arc Weld (GTAW) processes using proper filler metals in the 2G, 5G, and 6G positions. Upon completion, students should be able to perform shielded metal arc welding process and gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in the 2G, 5G, and 6G position in accordance with the applicable code.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0173C - Specialty Pipe Welding

150 Clock Hours
(Offered as needed)

This courses covers advanced pipe welding and is designed to build advanced GTAW skills. This course covers advanced Gas Tungsten Arc Welding (GTAW) on alloy pipe and heavy wall carbon pipe.

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PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POT 1002 - History and Ideas of Political Science

3 Credit Hours ❖
(Offered as needed)

This course reviews classical ideas, political theory and institutions from a historical and comparative viewpoint. It examines the rise of the State, its organization, economic systems, the use of force, and persuasion. This course qualifies as having an international and/or diversity focus for Teacher Education programs common prerequisites.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

PSC 2905 - Independent Study – Physical Science

1 Credit Hour
(Fall, Spring, Summer)

Directed study and individual projects designed to meet the needs of students interested in a specialized area of the physical sciences for which present course availability is limited. Meets specific general education requirements.

This course may be taken up to four times for credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

REA 0056 - Developmental Reading Module

2 College Prep Credits
(Fall, Spring, Summer)

This course is designed to increase the student's ability to comprehend college-level, written material (not applicable for degree completion). Conducted in a lab setting, this course is self-paced, designed to allow students to focus on their individual development of higher level reading skills and vocabulary needed for literal and critical interpretation of passages similar to those used in college texts. This course may be taken in place of REA 0017. Students must pass the class with a "C" or better and obtain a passing score on the end of course exam.

Prerequisite(s): Students must score 96-105 on the PERT or elective basis score 106 or higher on the PERT.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

REA 1205 - Reading Across the Genres I

3 Credit Hours
(Offered as needed)

This college-level reading course employs a variety of literary genres as the source material for building student skills in comprehension, context clues, reading speed, critical analysis, vocabulary, and other related reading skills. Students will be exposed to numerous styles and levels of reading material including novels, short stories, critical essays, drama, news reporting. Students will also develop a personal reading preference profile and learn how to identify books, magazines and other reading material commensurate with that profile.

Prerequisite(s): PERT placement score of 106 or higher.

RED 3309C - Early and Emergent Literacy K-2

3 Credit Hours
(Fall, Spring)

This course is designed to increase the understanding of early literacy development and the conditions which promote total literacy from birth through lower elementary grades. Language theory and current research are used to shape informed practices regarding literacy development. Connections are made among all aspects of literacy learning: reading, writing, listening, speaking and attitude development. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3511 - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/ literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a minimum grade of "C" or better and is restricted to practicing teachers.

Prerequisite(s): RED 3309C and upper division standing

Prereq/Corequisites: EDG 3410C, EDG 3343

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4312 - Integration of Assessment into Classroom Reading

3 Credit Hours
(Summer)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on integrating assessments into the curriculum to strengthen instructional strategies and student success. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): RED 3309C, RED 3511C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4519C - Diagnostic and Instructional Interventions in Reading

3 Credit Hours
(Fall, Spring)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on diagnosis of reading problems, administration of assessments, evaluation of results and planning instructional interventions to remediate reading difficulties. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4854C - Reading Field Experience

2 Credit Hours
(Fall, Spring)

This course provides application of knowledge of reading development to reading instruction. Emphasis is placed on increased reading proficiency for struggling students, including students with disabilities and students from diverse populations. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C, RED 4312, RED 4519C, upper division standing with permission of department chair

REL 2300 - Introduction to World Religions

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

This course will explore the principles and practices of the world's major religious traditions. The religions will be studied in their historical and contemporary forms. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

REL 2930 - Religion – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

RTE 1000 - Introduction to Radiologic Technology

2 Credit Hours
(Summer, Offered as needed)

This course is designed to provide an overview of the history of radiography and the role and scope of practice of the practitioner in the healthcare delivery system. Organizations, accreditation, federal agencies, regulatory agencies (including OSHA) and professional credentialing will be discussed. Content includes a fundamental background in medical law, ethics, human diversity and patient consent. The student will examine a variety of ethical issues and dilemmas found in clinical practice, as well as developing a better understanding of patients, the patient's families, and professional peers through comparison of diverse populations based on value systems, cultural and ethnic influences, communication styles and socioeconomic influences. Radiographic medical terminology and pharmacology will be covered. Site specific clinical education paperwork will be completed and students will perform required clinical observations in imaging departments. Background check, drug screening, training and clinical site approval mandatory.

Prerequisite(s): admission to the Radiography Program.

RTE 1111 - Introduction to Radiographic Patient Care

2 Credit Hours
(Fall)

This course is designed to prepare radiography students to provide basic patient care. Basic concepts of patient care will be described, as well as infection control procedures and standard precautions. This course includes hospital specific training. Health risks, life stages, HIV/AIDs and domestic violence will be discussed. This course also includes an introduction to medical and radiographic terminology. Topics include vital signs, venipuncture, body mechanics and transport, verbal/nonverbal communication, and some pharmacology.

Prerequisite(s): admission to the Radiography Program.

RTE 1418 - Radiographic Techniques I

3 Credit Hours
(Fall)

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. This course introduces the student to a comprehensive study and theory of the production of x-rays and primary exposure factors of radiographic imaging. The image parameters of density, contrast, recorded detail, image distortion and blur will be studied as well as ancillary devices and equipment required to produce a quality radiographic image. Digital imaging with related accessories will be emphasized. Class demonstrations and exercises are used to demonstrate application of theory.

Prerequisite(s): MAC 1105 or other Gordon Rule math course and admission to the Radiography Program.

RTE 1457C - Radiographic Techniques II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1418 Radiographic Techniques I. Course content includes the basics of magnetism, electricity, motors, generators, rectifying systems, x-ray tube and filament circuitry. Topics in electromagnetism such as self and mutual induction, high voltage transformation, and AC rectification will be emphasized. An introduction of special radiographic methods will include automatic exposure control, computers, fluoroscopy and image intensification, subtraction radiography, conventional tomography, digital image receptors, and digital image acquisition and manipulation.

Prerequisite(s): RTE 1418.

Corequisite(s): RTE 1513C

RTE 1503C - Radiographic Procedures I

4 Credit Hours
(Fall)

This course is designed to provide the Radiography student with instruction in radiographic examinations of the chest, abdomen, upper extremity and lower extremity. An introduction to medical and radiographic terminology, radiographic anatomy, and image critique are also included.

Prerequisite(s): BSC 1085C and admission to the Radiography program.

RTE 1513C - Radiographic Procedures II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1503C. It is designed to provide the student with instruction in radiographic procedures and anatomy in the distal extremities, hip region, spine, ribs, and sternum and the cranium. Critical thinking, medical and radiographic terminology, as well as image critique are emphasized.

Prerequisite(s): RTE 1503C, RTE 1804L , and BSC 1086C

Corequisite(s): RTE 1814L.

RTE 1804L - Radiography Clinical Education I

3 Credit Hours
(Fall)

This course involves the practical application of the theories covered in RTE 1503C and RTE 1000. Rotations provide experience with various imaging systems, protocols, and patient care. Students observe, assist and perform basic radiographic procedures (chest, abdomen and extremities) under direct supervision. This course emphasizes patient care and critical thinking. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1000

Corequisite(s): RTE 1503C

RTE 1814L - Radiography Clinical Education II

3 Credit Hours
(Spring)

This course is a continuation of Radiography Clinical Education I. This clinical training emphasizes lower and upper extremity. Medical and radiographic terminology, patient care, critical thinking and communication skills are emphasized. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1804L

Corequisite(s): RTE 1513C.

RTE 1824L - Radiography Clinical Education III

4 Credit Hours
(Summer)

This course is a continuation of Radiography Clinical Education II. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I and II. The student will gain experience and develop clinical competence in general radiographic procedures such as the cranium and specialized contrast studies. Advanced patient care skills, critical thinking, imaging and exposure techniques, radiation protection application and image processing will be emphasized. This rotation covers clinical experience in all phases of fundamental radiologic procedures and image critique. Students will rotate through ancillary departments in this course.

Prerequisite(s): RTE 1814L

Corequisite(s): RTE 2523C.

RTE 2061 - Radiographic Preparation for Practice

4 Credit Hours
(Spring)

This course is designed review information in preparation for the student to take the American Registry of Radiologic Technologist (ARRT) registry examination. The course will cover patient care and education, image production, equipment operation and maintenance, radiographic procedures and radiation protection. The student will also be given simulated registry examinations for practice and assessment purposes.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2854L.

RTE 2385 - Radiographic Protection and Biology

3 Credit Hours
(Fall)

This course is designed to provide the student with an overview of the principles of interaction of ionizing radiation with living systems. Ionizing effects on molecules, cells, tissues and the body as a whole are presented, along with factors affecting biological response, including; acute, chronic, stochastic and non-stochastic effects. This course is also designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and healthcare organizations are incorporated, as are the various methods of monitoring radiation exposure and acceptable dose limit values.

Prerequisite(s): RTE 1000, RTE 1418, RTE 1457C, RTE 2523C

Corequisite(s): RTE 2844L.

RTE 2473 - Radiographic Quality Assurance

2 Credit Hours
(Fall)

This course is designed to introduce the radiography student to evaluation methodology of radiographic systems to assure consistency in the production of quality images. Image critique, fluoroscopy, malfunctions, and specifications are some of the topics covered in the course.

Prerequisite(s): RTE 1418, RTE 1457C

Corequisite(s): RTE 2844L.

RTE 2523C - Radiographic Procedures III

3 Credit Hours
(Summer)

This course is a continuation of RTE 1513C covering cranium procedures and positioning. It is designed to provide the student with instruction in more complex radiographic procedures such as fluoroscopy, urinary studies, bone age, trauma, pediatrics, mobile and surgical radiography. Included is instruction in additional modalities and studies such as CT, MRI, arthography, myelography, and vascular studies. Attention will be given to the specialized equipment, contrast media, critical thinking and techniques necessary to perform these procedures. Radiographic anatomy, pathology, and critique of images are included in this course.

Prerequisite(s): RTE 1513C

Corequisite(s): RTE 1824L.

RTE 2533C - Radiographic Procedures IV

2 Credit Hours
(Fall)

This is a continuation of RTE 2523C, with emphasis on special procedures and additional modalities. Students are required to complete observations hours within specialty areas.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L

RTE 2571 - Introduction to Computed Tomography

1 Credit Hour
(Spring)

This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency.

Prerequisite(s): RTE 1457C

RTE 2782 - Radiographic Pathology

3 Credit Hours
(Spring)

This course is designed to introduce theories of disease causation and the pathophysiologic disorder that compromise healthy persons. Etiology, pathophysiologic responses, clinical manifestations, and radiographic appearance of alterations in body systems will be presented. Emphasis will be placed on pathological findings on diagnostic radiographic images.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2854L.

RTE 2844L - Radiography Clinical Education IV

5 Credit Hours
(Fall)

This course is a continuation of RTE 1824L. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I, II and III. The student will gain experience and develop clinical competence in specialized imaging procedures, and mobile, surgical and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 1824L

Corequisite(s): RTE 2385.

RTE 2854L - Radiography Clinical Education V

5 Credit Hours
(Spring)

This course is a continuation of RTE 2844L. The terminal objective for this course is to prepare the student for employment as an entry level technologist. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I-IV and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2061.

RTE 2910 - Radiographic Evidence Based Practice

1 Credit Hour
(Fall)

This course is designed to develop the student's research, writing and oral presentation skills; while completing assignments, both independently and collaboratively, with minimal direction and supervision. Methods of research, appropriate style of writing, citing work, and using APA format will be covered.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L.

♦This college credit course may not be applied toward the A.A. degree and normally is not intended for transfer unless the student transfers to a baccalaureate in radiologic sciences degree program that is specified under the Florida Statewide AS to BS Articulation Agreement.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4930C - Seminar in Science Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in science, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching science in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4945 - Internship - Middle Grades Science

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Science in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430, EDG 3343, EDG 3410C, EME 3410C, EEX 3070, ESC 1000, EVR 3949, ISC 4145, MET 1010C, RED 3324C, RED 3335C, SCE 3350C, SCE 4940C, TSL 3081C, and CHM 1020 or PHY 1020

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college

resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 1201 - Service Learning Seminar

1 Credit Hour
(Offered as needed)

A seminar course designed to enhance and reinforce the value of civic responsibility and to provide students with a community service program opportunity by volunteering in community agencies in the public and private sectors.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2221 - Spanish IV

4 Credit Hours
(Offered as needed)

Completion of intermediate level review of grammar, readings in Spanish literature, and development of conversational and writing skills.

Prerequisite(s):
SPN 2220 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 3036 - Spanish for Health Care Providers

3 Credit Hours
(Offered as needed)

Spanish for Health Care Providers is designed for individuals majoring in nursing or working in health-related areas. The course focuses on vocabulary needed for the healthcare workplace, with grammar taught as a task-based practical skill. Students will learn phrases used to complete health assessments which include conducting interviews, filling out forms, writing reports, and reading and understanding medical articles and brochures. Prevalent disease processes will be discussed as well as cultural practices that affect health care, specifically the health care of Spanish-speaking patients. This course does not fulfill any part of the Florida state language requirements.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SYG 2430 - The Family and Society

3 Credit Hours
(Fall, Spring, Summer)

An examination of the problems which arise out of participation in marriage, family and community situations. Designed to provide students with a basic understanding of the dynamics of family interaction, the effects upon the children, and the family's relationship to and participation in the community.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

THE 1905A - Independent Study – Theater

1 Credit Hour
(Offered as needed)

A defined independent study which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule. Departmental approval required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): Approval from department chair, a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2071 - Humanities – Cinema Appreciation

3 Credit Hours † ¶
(Fall, Spring, Summer)

An introduction to the origin, development, cultural aspects and analysis of cinema topics. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2300 - Dramatic Literature

3 Credit Hours † ¶
(Fall, Spring)

Survey of dramatic works from the Greeks to the 20th century, with emphasis on the plays of the 19th and 20th centuries; intensive investigation and script analysis with reports, lectures and discussions. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

THE 2820 - Musical Theater Workshop

3 Credit Hours
(Summer)

An introduction to creative dramatics and children's theater. Topics span a wide range of interests; creative experience, children and theater, workshop procedure, script selection, rehearsal and performance.

THE 2821 - Musical Theater Workshop II

3 Credit Hours
(Summer)

Creative dramatics introduces the many elements of theater: dance, voice and musical theater. Topics span a wide range of interests: the creative process, workshop procedures, rehearsal and performance. Creative Dramatics will focus on producing a final performance.

Prerequisite(s): THE 2820.

THE 2930 - Theater – Special Topics

3 Credit Hours
(Fall, Spring)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2170 - Introduction to Theatre Production Documentation

3 Credit Hours
(Offered as Needed)

This course is an introduction to the presentation of information necessary to document the design and production process.

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

TPA 2276C - Entertainment Technology - Crafts

3 Credit Hours
(Spring)

This course presents the practices and principles of advanced woodworking, welding, smithing, casting, ceramics, plaster work, fiberglass and plastic technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented that will use items created in a realized production.

Prerequisite(s): TPA 1210.

TPA 2292 - Technical Theatre Lab III

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1291

TPA 2301 - Technical Theatre Lab IV

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 2292

TPA 2331 - Costume Construction

3 Credit Hours
(Offered as needed)

An introduction to costume construction techniques and wardrobe design. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in costume construction.

Prerequisite(s): TPA 2232

TPA 2343 - CAD for the Theatre

3 Credit Hours
(Offered as Needed)

This course is project oriented covering fundamental through advanced material in computer aided drafting and design and its application for the theatre.

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1192 - Rehearsal and Performance III

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1191.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2120 - Improvisation

3 Credit Hours
Offered as needed

This course explores the use of creativity and imagination, engaging the actor in a wide variety of improvisational theatre games.

TPP 2141 - Acting in Shakespeare

3 Credit Hours
(Offered as needed)

This course is an introduction to the concepts, principles, and skills needed to develop characters in Shakespeare's plays. The course focuses on the hidden clues in the text to discover character choices and meaning. Specific analysis and the techniques of scansion are introduced as they relate to character interpretation. Application of these techniques will be presented in scenes and monologues.

TPP 2150 - Advanced Scene Study

3 Credit Hours
(Fall)

This course is a continuation of the processes and concepts of TPP 2111, Acting II, with the addition of new techniques to create dynamic and engaging characterizations through performance.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2250 - Introduction to Musical Theatre

3 Credit Hours
(Fall)

Introduction to the study of Musical Theater analysis, creation, and performance with an emphasis on singing, dancing, and acting.

TPP 2301 - Directing I

3 Credit Hours
(Offered as needed)

A beginning course in the study, development and training in directing for the theater. Although not a prerequisite, students are encouraged to take Acting I and II before Directing I.

TPP 2302 - Directing II

3 Credit Hours
(Offered as needed)

Directing II is a continued study of the basic principles of directing for the theater with emphasis in the continued study, development and training in directing for the theater.

Prerequisite(s): TPP 2301.

TPP 2533 - Stage Combat I (Unarmed & Rapier)

3 Credit Hours
(Spring)

Through in-class study and performance the student will develop an understanding of and proficiency in the safe techniques of unarmed and rapier stage combat which are required of a theatrical performer. Application of these techniques will be presented in two scenes, one for unarmed and one for rapier.

TPP 2930 - Theater Performance – Special Topics

3 Credit Hours
(Fall, Spring, Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

TRA 0080 - Tractor Trailer Truck Driver

320 Clock Hours
(Spring)

This course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety,

accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

TRA 0086 - Tractor Operator

150 Clock Hours
(Fall)

This course is designed to build on the skills and knowledge students learned in the Heavy Equipment Maintenance Technician course for entry into the Heavy Equipment Operations industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study pneumatic and crawler-type tractor operations.

TRA 0650 - Natural Gas Distribution I

75 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance.

TRA 0650B - Natural Gas Distribution IB

75 Clock Hours
(Fall)

This course is prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance. This course continues the knowledge acquired in the TRA0650.

TRA 0651 - Natural Gas Distribution II

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Prerequisite(s): TRA 0650

TRA 0652 - Natural Gas Distribution III

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

TRA 3132 - Procurement Management

3 Credit Hours
(Offered as Needed)

Purchasing is required by all types of goods-producing & service-providing organizations in such sectors as manufacturing, agriculture, health care, & government. This professional business function tries to buy the right good or service at the right quality, in the right quantity, at the right time, at the right price, from the right source, with delivery at the right place.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

TRA 4203 - Principles of Logistics

3 Credit Hours
(Offered as Needed)

Overview of logistics function within a firm and in the context of integrated vertical systems. Topics include customer service, information flow, inventory control, materials management, order processing, packaging, physical distribution.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

TSL 3081 - TESOL Issues and Practices

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C." Neither field experience or a background check/fingerprinting are required for current teachers enrolled in this course.

Prerequisite(s): Upper division standing

Prereq/Corequisites: EDG 3410C, EDG 3343

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 4140C - ESOL Methods, Curriculum and Assessment

3 Credit Hours
(Fall, Spring)

This course is designed to build on the candidate's knowledge of applied linguistics and cross cultural communication. Candidates will extend their understanding of the role of language and culture in the classroom. This course will prepare candidates for effective planning, instruction, and assessment of ELLs in the classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): TSL 3081C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

WOH 1012 - World Civilization I

3 Credit Hours ❖ ¶
(Fall)

A study of world history from 4000 BC to 1650 AD as it relates to the development of western civilization. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1022 - World Civilization II

3 Credit Hours ❖ ¶
(Spring)

A study of history from 1650 AD to the present as it relates to the development of the modern world. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

XEL 01___ - ESOL I

This course provides small group and individualized instruction in both oral and written English communication skills at the beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 02___ - ESOL II

This course provides small group and individualized instruction in both oral and written English communication skills at the low beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 03___ - ESOL III

This course provides small group and individualized instruction in both oral and written English communication skills at the high beginning level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 04___ - ESOL IV

This course provides small group and individualized instruction in both oral and written English communication skills at the low intermediate level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 05___ - ESOL V

This course provides small group and individualized instruction in both oral and written English communication skills at the high intermediate level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XEL 06___ - ESOL VI

This course provides small group and individualized instruction in both oral and written English communication skills at the advanced level. The course is designed for non-native English speakers.

* Course number varies with number of instructional contact hours.

XGE 14__ - GED 2014 Comprehensive

The GED 2014 Comprehensive Preparation Program provides skills and knowledge building for each of the four content-area assessments of the Official GED 2014 Tests: Reasoning through Language Arts, Mathematics Reasoning, Science, and Social Studies. The purpose of the program is to prepare students to obtain the knowledge and skills necessary to pass the Official GED Tests and be awarded a State of Florida High School Diploma. An

additional performance level will certify that the adult student is career and college ready. This program strives to motivate students not only to obtain a GED diploma, but to continue their education to earn a postsecondary degree, certificate, or industry certification.

*Course number varies with number of instructional contact hours.

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

Certificate to AS Degree Career Paths

Associate in Science (AS) degrees have companion certificates (CCC) that can be used as career paths toward the AS degree. Students who complete one or more college credit certificate(s) in the career path have completed approximately 45%-50% of the course requirements in the companion A.S. degree. Students should meet with an Academic Advisor or a faculty advisor in the career area to explore these opportunities.

Associate in Science Degrees (AS) and Certificates

Associate in Science Degree (AS)

The Associate in Science degree provides students with college credit curricula designed to prepare them for employment in various semi-professional, technical, and supervisory fields. The A.S. degree programs include a minimum of 60 college credit hours, of which at least 18 are general education courses. The A.S. degree is not generally intended for transfer: however, many students eventually pursue upper division study after completing the A.S. degree. In recognition of this practice, the general education courses required for the A.S. degree meet all applicable Gordon Rule standards and minimum grade requirements; all are transferable as general education credits to upper division institutions in the Florida State University System. Many of the technical courses in the A.S. degree are also transferable, but students should work closely with an advisor in selecting technical courses if transfer is an eventual goal.

Companion Certificate Programs

Many of the technical certificate programs offered by NWF State College provide the initial step in meeting selected course requirements for an A.S. degree in a related area. Courses from those certificates are the same as or equivalent to comparable courses in the companion degree program. Likewise, courses used in the degree program may be applied to a certificate in a related area; in many cases, completion of the technical courses in the degree program can automatically qualify the student to receive the companion certificate.

Graduation Requirements for A.S. Degree

A.S. degree students must satisfy the following requirements:

- Complete the A.S. general education courses as appropriate to the program of study, including Speaking-Across-the-Curriculum, Technology-Across-the-Curriculum, minimum Gordon Rule course and minimum grade requirements.
- Complete at least fifteen credits of the technical core courses and technical elective courses specified in the degree program at NWF State College, unless there is an established articulation agreement.
- Complete at least 25% of the credits at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued at NWF State College.
- Maintain a cumulative grade point average of at least 2.00 for all college credit course work pursued, whether at NWF State College or by transfer.
- Complete AS Degree General Education Requirements (all Gordon Rule courses require a minimum grade of "C").

Customizing an A.S. to Meet a Specific Career Goal

In order to provide a student with the strongest technical background feasible, some technical courses within a given degree program may be adjusted to meet the student's targeted career goal. In these special cases, course

substitutions may be approved upon request of the appropriate department chair to the Dean of Career and Technical Education.

College Credit Certificates (CCC)

College credit certificates range from eleven (11) to forty-two (42) credits in length, although most are comprised of thirty (30) credits, and require approximately one academic year to complete. Courses in these certificates include professional and technical skills, with an emphasis on practical application.

Each of the NWF State College credit certificates is paired with a companion A.S. degree program. Upon successful completion of the college credit certificate, the student may receive credit toward approximately 45% to 50% of the course requirements in the companion degree program. Conversely, students who successfully complete the technical credits within a companion degree program may qualify for graduation from the appropriate certificate program. In this manner, students may receive two graduation credentials from the college. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Career and Technical or Vocational Certificates (PSAV)

Career and technical or vocational certificates are comprised of clock hour courses and are designed to prepare students for direct entry into employment. The certificates are generally less than one year in length and are designed to prepare students for employment in selected occupational skill areas. The curriculum is heavily oriented toward problem solving and skill application. In certain circumstances, the skills acquired through completion of a career and technical or vocational certificate may be articulated into comparable college credit work and applied to college credit certificate, or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Graduation Requirements for Certificate

To successfully complete a college credit or a career and technical or vocational certificate, the student must meet the following requirements.

1. Complete the courses and other requirements as specified in the program of study. (With advance approval, college credit courses may be substituted for equivalent vocational courses in any career and technical or vocational certificate.)
2. Complete at least 25% of the certificate coursework in residence at Northwest Florida State College.
3. Maintain a cumulative GPA of not less than 2.00 in all coursework pursued for the certificate.
4. Satisfy all other college graduation requirements.

In addition, students wishing to complete a career and technical or vocational certificate must demonstrate minimum skill levels in reading, communications, and mathematics, as measured by the TABE. The levels vary for each program of study.

Certificate to AS Degree Career Paths

Many of the technical certificate programs offered by NWFSC provide the initial step in meeting selected course requirements for an A.S. degree in a related area. Courses from those certificates are the same as or equivalent to comparable courses in the companion degree program. Likewise, courses used in the degree program may be applied to a certificate in a related area; in many cases, completion of the technical courses in the degree program can automatically qualify the student to receive the companion certificate. Listed below are the NWFSC Associate in Science degrees and their companion certificates.

Accounting Technology

Associate in Science

Accounting Technology (AS)

Admission Program of Study Code ACCT
State CIP Code 1552030201

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Accounting Technology Management (CCC) (State CIP Code 0552030205).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 36

Technical Elective Courses

Select 6 credits from the following:

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Accounting Technology (AS) (ACCT)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours**

MTB 1103 - Business Mathematics **3 Credit Hours**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Humanities General Education **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ECO 2013 - Economics I **3 Credit Hours ♦**

ENC 2210 - Technical Report Writing **3 Credit Hours**

ACO 1806 - Payroll Accounting **3 Credit Hours**

Science General Education Course **3 Credit Hours**

Additional General Education Credits **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

ACG 2001 - Accounting I **3 Credit Hours**

BUL 2241 - Business Law I **3 Credit Hours**

Technical Elective **3 Credit Hours**

Social Science General Education **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ACG 2011 - Accounting II **3 Credit Hours**

ACG 2450 - Computer Applications for Accounting **3 Credit Hours**

TAX 2000 - Federal Income Tax: Individual **3 Credit Hours**

ACG 2071 - Managerial Accounting **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15
Total Program Hours: 60

College Credit Certificate

Accounting Technology Management (CCC)

Admission Program of Study Code AASA
State CIP Code 0552030205

Students who successfully complete this certificate may be eligible to receive credits towards the Accounting Technology (AS) degree (State CIP Code 1552030201).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 27

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Accounting Technology Management (CCC) (ACCM)

Fall Semester ACG 2001 - Accounting I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** ACG 2450 - Computer Applications for Accounting **3 Credit Hours** ACG 2071 - Managerial Accounting **3 Credit Hours** ACO 1806 - Payroll Accounting **3 Credit Hours** TAX 2000 - Federal Income Tax: Individual **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 27

Architectural Design and Construction Technology

Associate in Science

Architectural Design & Construction Technology - Architectural Design Option (AS)

Admission Program Objective Code ARDO
State CIP Code 1604090100

The purpose of this program is to prepare students for employment as architectural drafters in the residential design and light commercial structures field.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Total Core Credits Required: 30

Technical Elective Courses

Select 18 credits from the following:

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

EGN 1130C - Descriptive Geometry

3 Credit Hours
(Fall, Spring, Summer)

Covers basic principles of orthographic projection, auxiliary views and rotation as they apply to points, lines and planes in space; addition of coplanar and non-coplanar vectors; intersections and developments; and selected abstract, exponometric and oblique projection, and practical problems.

Prerequisite(s): EGN 1111C or equivalent.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic

projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

Total Technical Elective Credits Required: 18

Total Program Credits Required: 66

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Architectural Design & Construction Technology - Architectural Design Option (AS) (ARDO)
First Year
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** BCN 1272 - Blueprint Reading for Commercial Construction **3 Credit Hours - Offered at Night Only** BCN 1230 - Building Construction Materials and Processes **3 Credit Hours - Offered at Night Only** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ETD 1320C - AutoCAD I **3 Credit Hours** EGN 1111C - Engineering Graphics **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **3 Credit Hours**

Total Semester Hours: 12
Summer Semester ETD 1340C - AutoCAD II **3 Credit Hours** ARC 2201 - Theory of Architecture **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** General Education Course **- 3 Credit Hours** **Total Semester Hours: 12**
Second Year
Fall Semester ARC 2303A - Design 2.1 **6 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course **- 3 Credit Hours** **Total Semester Hours: 15**
Spring Semester TAR 2121C - Architectural Drafting **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course **- 4 Credit Hours** Additional General Education Hours **- 2 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 66

Architectural Design & Construction Technology - Construction Technology Option (AS)

Admission Program Objective Code ARCO
State CIP Code 1604090100

The purpose of this program is to prepare students for employment in the building construction field in the residential design and light commercial structures.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

Total Core Credits Required: 30

Technical Elective Courses

Select 18 credits from the following:

BCN 1520 - Electrical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with electrical terminology, practices, methods, code requirements and safety and health in construction.

BCN 1567 - Plumbing and Gas Construction Practices

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with Plumbing and Gas code requirements, terminology, methods, practices, processes and safety and health used in building construction.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

BCN 2560 - Mechanical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with mechanical trades terminology, methods, practices, code requirements processes, and safety and health criteria in mechanical construction.

BCN 2721 - Construction Management/Planning

3 Credit Hours
(Fall, Spring, Summer)

The course covers project development and organization from pre-construction site investigation to final completion. The course will include the management of project estimates, plans, schedules, operations and safety. The student will become knowledgeable about documents used in the construction industry for bid, contracts, zoning, permits, bonds, loans specifications and drawings. Cost engineering, procurement, value engineering and quality assurance will be covered. Cost management through job cost analysis and purchase order systems will also be covered.

BCT 1763 - Construction Safety and Health

3 Credit Hours
(Fall, Spring, Summer)

A basic course in construction safety and health, covering such topics as: theories of accident causation; workplace hazards; hazard analysis and prevention; accident reporting; OSHA construction standard and safety practices; environmental safety; violence in the workplace; ergonomics; ethics and safety; workers' compensation; and stress on the job.

BCT 2761 - Structural Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with structural terminology, practices, methods, code requirements and safety, and health criteria in construction.

BCT 2770 - Construction Estimating

3 Credit Hours
(Fall, Spring)

A course in estimating as it relates to the construction industry covering references, estimating methods, take-off organization and presentation; material take-off, cost estimating in heavy construction, mathematical formulas for estimating, quantity take-off from plan review, and computer estimating overview.

Prerequisite(s): BCN 1230, BCN 1272.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 18

Total Program Credits Required: 66

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Architectural Design & Construction Technology - Construction Technology Option (AS) (ARCO)
First Year
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** BCN 1230 - Building Construction Materials and Processes **3 Credit Hours** - **Offered at Night Only** BCN 1272 - Blueprint Reading for Commercial Construction **3 Credit Hours - Offered at Night Only** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester ETD 1320C - AutoCAD I **3 Credit Hours** Technical Elective **3 Credit Hours** EGN 1111C - Engineering Graphics **3 Credit Hours** General Education Course - **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester ETD 1340C - AutoCAD II **3 Credit Hours** ARC 2201 - Theory of Architecture **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** General Education Course **- 3 Credit Hours** **Total Semester Hours: 12**
Second Year
Fall Semester ARC 2303A - Design 2.1 **6 Credit Hours - Offered at Night Only**

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester TAR 2121C - Architectural Drafting **3 Credit Hours - Offered at Night Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course - **4 Credit Hours** Additional General Education Hours **- 2 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 66

Business Administration

Associate in Science

Business Administration (AS)

Admission Program of Study Code BADM
State CIP Code 1552020102

Students who successfully complete selected courses from this program of study may be eligible to receive the Business Management (CCC) (State CIP Code 0552070101), Business Development and Entrepreneurship (CCC) (State CIP Code 0552070306), and/or Business Specialist (Marketing) (CCC) (State CIP Code 0552020103) college credit certificates.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Administration (AS) (BADM)
First Year
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours** ♦ ▲ ¶ Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ACG 2011 - Accounting II **3 Credit Hours** BUL 2241 - Business Law I **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours** ♦ Science General Education Course **3 Credit Hours** Additional General Education Hours **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester MAN 2021 - Management **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ENC 2210 - Technical Report Writing **3 Credit Hours** ACG 2071 - Managerial Accounting **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Business Development and Entrepreneurship (CCC)

Admission Program of Study Code BMDE
State CIP Code 0552070306

Students who successfully complete this certificate may be eligible to receive credits towards the Business Administration (AS) degree (State CIP Code 1552020102).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ENT 2931 - Selected Studies in Entrepreneurship

1 Credit Hour
(Spring)

In this course, topics of current interest are presented in group instruction.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 25

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Development and Entrepreneurship (CCC) (Program Code Needed
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** GEB 2430 - Business Ethics **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester BUL 2241 - Business Law I **3 Credit Hours**

MAN 2300 - Personnel Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** SBM 2000 - Small Business Management **3 Credit Hours** ENT 2931 - Selected Studies in Entrepreneurship **1 Credit Hour** **Total Semester Hours: 13**
Total Program Hours: 25

Business Management (CCC)

Admission Program of Study Code BMGC
State CIP Code 0552070101

Students who successfully complete this certificate may be eligible to receive credits toward the Business Administration (AS) degree (CIP Code 1552020102).

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 12 credits from the following:

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders,

and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Management (CCC) (BMGC)
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 24

Business Specialist (Marketing) (CCC)

Admission Program of Study Code BUSS
State CIP Code 0552020103

Students who successfully complete this certificate may be eligible to receive credits toward the Business Administration (AS) degree (CIP Code 1552020102).

Core Courses

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Business Specialist (Marketing) (CCC) (BUSS)
Fall Semester MAR 2011 - Introduction to Marketing **3 Credit Hours** MKA 2021 - Professional Selling **3 Credit Hours** **Total Semester Hours: 6** **Spring Semester** MKA 2041 - Retail Management **3 Credit Hours** MKA 2511 - Introduction to Advertising **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 12

Computer Engineering Technology

Associate in Science

Computer Engineering Technology (AS)

Admission Program of Study Code CENG
State CIP Code 1615120100

Students who successfully complete selected courses from this program of study may be eligible to receive the Microcomputer Repairer/Installer (CCC) (State CIP Code 0647010406) college credit certificate.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2143C - CompTIA Server+

3 Credit Hours
(Spring)

This course provides advanced concepts in server hardware components and troubleshooting in a non-vendor-specific environment. Introduction to server installation, server storage concepts, administering services, server roles, virtualization, performance monitoring, security, data protection, and maintenance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN

Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2941 - Computer Engineering Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2942 - Computer Engineering Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

- COP 2XXX- Any Computer Programming Course **3 Credit Hours**

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Engineering Technology (AS) (CENG)
First Year
Fall Semester CIS 1000 - Introduction to Computer Science **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2143C - CompTIA Server+ **3 Credit Hours** Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**

Second Year
Fall Semester CTS 1156C - Desktop Support **3 Credit Hours** COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CET 2660 - Network Security **3 Credit Hours** Social Science General Education **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester Technical Elective **2 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Microcomputer Repairer/Installer (CCC)

Admission Program of Study Code MCCR
State CIP Code 0647010406

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Engineering Technology (AS) degree (State CIP Code 161520100).

Core Courses

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include

disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Microcomputer Repair/Installer (CCC) (MCCR)
Fall Semester CET 2179C - PC Operating Systems A+ **3 Credit Hours** CTS 1156C - Desktop Support **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 9** **Spring Semester** CET 2660 - Network Security **3 Credit Hours** CET 2182C - PC Hardware A+ **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 15

Computer Programming and Analysis

Associate in Science

Computer Programming and Analysis (AS)

Admission Program Objective Code CPRO
State CIP Code 1511020101

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Computer Programmer (CCC) (State CIP Code 0511020200) and/or Computer Programming Specialist (CCC) (State CIP Code 0511020103).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Science **3 Credit Hours**
- ____ ____ Social Science **3 Credit Hours**
- ____ ____ General Education Electives **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programming and Analysis (AS) (CPRO)	Companion Certificates*

First Year	CMPG	CMPS
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√
Spring Semester COP 2220 - Programming in C **3 Credit Hours** COP 2224 - Programming in C++ **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** MAD 2104 - Introduction to Discrete Mathematics **3 Credit Hours** Science General Education Course **3 Credit Hours** **Total Semester Hours: 15**	√ √ √	 √ √
Second Year		
Fall Semester CGS 2820 - Web Design **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Social Science General Education Course **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**	√	√
Spring Semester COP 2010 - Visual Basic Programming **3 Credit Hours** COP 2228 - Advanced Programming in C++ **3 Credit Hours**	√	

COP 2700 - Introduction to SQL **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: CMPG - Computer Programmer (CCC) CMPS - Computer Programming Specialist (CCC)		

College Credit Certificate

Computer Programmer (CCC)

Admission Program of Study Code CMPG
State CIP Code 0511020200

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Programming and Analysis (AS) degree (State CIP Code 1511020101).

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 12 credits from the following:

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 33

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programmer (CCC) (CMPG)
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester COP 2220 - Programming in C **3 Credit Hours** COP 2010 - Visual Basic Programming **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours** COP 2700 - Introduction to SQL **3 Credit Hours** COP 2224 - Programming in C++ **3 Credit Hours** **Total Semester Hours: 15**
Summer Semester COP 2805 - Advanced Java Programming **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**

Total Program Hours: 33

Computer Programming Specialist (CCC)

Admission Program of Study Code CMPS
State CIP Code 0511020103

Students who successfully complete this certificate may be eligible to receive credits towards the Computer Programming and Analysis (AS) degree (State CIP Code 1511020101).

Core Courses

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 12

Technical Elective Courses

Select 6 credits from the following:

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer Programming Specialist (CCC) (CMPS)
Fall Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester COP 2224 - Programming in C++ **3 Credit Hours** COP 2800 - Introduction to Java Programming **3 Credit Hours**

Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 18

Criminal Justice Technology

Associate in Science

Criminal Justice Technology (AS)

Admission Program of Study Code CJTC
State CIP Code 1743010302

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- PSY 2012 Psychology **3 Credit Hours** ♦
- SYG 2000 Sociology **3 Credit Hours** ♦ ❖

Total General Education Credits Required: 18

Core Courses

CCJ 1010 - Introduction to Criminology

3 Credit Hours
(Spring)

A study of the nature and causes of crime and delinquency; the development of delinquent and criminal behavior; theory development in criminology, crime rates and trends, victimology and particular crime pattern areas.

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CJC 2000 - Introduction to Corrections

3 Credit Hours
(Fall)

Theories of punishment and incarceration; the organization of correction programs and institutions, principles of probation and parole, role of parole and probation officers, legal implications; and problems of rehabilitation are covered. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJE 2300 - Police Administration and Organization

3 Credit Hours
(Fall, Spring, Summer)

This course presents the principles of organization and administration in law enforcement including functions and activities, planning and research, public relations, personnel and training, inspection and control, records and communications and custody.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CCJ 1941 - Internship – Criminal Justice

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Permission of the instructor

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CCJ 2509 - Introduction to Gangs and Crime

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of street gangs, the social factors, and the general classifications necessary for the law enforcement, corrections, and public safety professional. This course explores the history, membership, activity, current trends, and influence of street gangs. Students will be challenged to define community-based solutions and strategies to combat the criminal activity associated with street gangs.

CCJ 2934 - Special Topics in Criminal Justice

2 Credit Hours
(Fall, Spring, Summer)

This course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

*This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CJE 1642C - Introduction to Crime Scene Technology

3 Credit Hours
(Fall, Spring, Summer)

This course explains and discusses the principals and theories in crime scene technology. The course covers specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence, gunshot residue, blood splatter and bodies.

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2330 - Ethics in Criminal Justice

3 Credit Hours
(Fall, Spring, Summer)

This course is a detailed exploration of ethical issues in Criminal justice with special emphasis on morality and the law, human behavior, and ethical decision making in law enforcement, corrections and the courts.

CJE 2400 - Police and Community Relations

3 Credit Hours
(Fall, Spring, Summer)

A study of the relationship of the Justice Administration agencies to the surrounding community. Examines the effect of social change and the consequences that it produces upon law enforcement, corrections, and the courts.

CJE 2600 - Criminal Investigations

3 Credit Hours
(Offered as needed)

Fundamentals of investigation; duties and responsibilities of the detective; interrogation techniques; search and techniques of protecting the crime scene; collection and preservation of evidence; modus operandi systems; scientific aids and other sources of information; court preparation and case follow-up.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

CJJ 1002 - Juvenile Delinquency

3 Credit Hours
(Offered as needed)

A study of the nature and cause of juvenile delinquency, the development of the delinquent and criminal behavior, specific criminal justice subsystem (law enforcement, judicial, corrections) problems dealing with juvenile delinquents from initial contact through final disposition and treatment. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJL 2130 - Criminal Evidence and Procedure

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of criminal procedure particularly applied to search and seizure and evaluation of evidence.

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Criminal Justice Technology (AS) (CJTC)
First Year
Fall Semester CCJ 1020 - Introduction to Criminal Justice **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours** Technical elective **3 Credit Hours** Technical elective **3 Credit Hours** **Semester Total Hours: 15**
Spring Semester CCJ 1010 - Introduction to Criminology **3 Credit Hours** CJC 2000 - Introduction to Corrections **3 Credit Hours** PSY 2012 - Psychology **3 Credit Hours ♦** Humanities General Education **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Second Year
Fall Semester CJL 1100 - Criminal Law **3 Credit Hours**

CJL 2500 - Courts and the Judicial Process **3 Credit Hours** SYG 2000 - Sociology **3 Credit Hours** ❖ ♦ Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Spring Semester CJE 2300 - Police Administration and Organization **3 Credit Hours** CJJ 1002 - Juvenile Delinquency **3 Credit Hours** CJL 1400 - Criminal Procedure **3 Credit Hours** Natural Sciences **3 Credit Hours** Technical Elective **3 Credit Hours** **Semester Total Hours: 15**
Total Program Hours: 60

Vocational Certificate

Auxiliary Law Enforcement Officer Basic (PSAV)

Admission Program of Study Code LEAY
State CIP Code 0743010701

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the

awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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Total Program Hours Required: 333

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Auxiliary Law Enforcement Officer Basic (PSAV) (LEAY)
Fall Semester CJK 0240 - Law Enforcement Auxiliary Introduction **27 Clock Hours** CJK 0241 - Law Enforcement Auxiliary Patrol and Traffic **21 Clock Hours** CJK 0242 - Law Enforcement Auxiliary Investigations **18 Clock Hours** CJK 0422 - Dart-Firing Stun Gun **9 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0020 - Law Enforcement CMS Vehicle Operations **48 Clock Hours** **Total Semester Clock Hours: 333**

Total Program Clock Hours: 333

Correctional Officer (Basic) (PSAV)

Admission Program of Study Code CORR
State CIP Code 0743010200

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0300 - Introduction to Corrections

33 Clock Hours
(Offered as needed)

This course introduces students to the legal and ethical responsibilities of a correctional officer. Legal terms and definitions are explained. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0305 - CJSTC Communications

42 Clock Hours
(Offered as needed)

This course covers the entire report writing process. Topics include interview and interrogation, interpersonal communication, and practical exercises. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0310 - Officer Safety

12 Clock Hours
(Offered as needed)

Correctional officer safety procedures are learned. Students will learn to identify potential hazards and learn how to safely respond. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0315 - Facility and Equipment

12 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for inspecting a correctional facility and equipment. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0320 - Intake and Release

18 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for admitting and releasing inmates in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0325 - Supervising in a Correctional Facility

42 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for supervising inmates in a correctional facility. They also learn to detect crimes and rule violations in various correctional facility settings. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0330 - Supervising Special Populations

21 Clock Hours
(Offered as needed)

Students learn how to identify and supervise special population groups, such as threat groups, juveniles, elderly, and mentally ill inmates. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0335 - Responding to Incidents and Emergencies

18 Clock Hours
(Offered as needed)

Students learn how to identify and respond to situations involving escapes, riots, bomb threats, fires, and medical emergencies in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing

range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0340 - Corrections PSAV Physical Fitness

30 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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Total Program Hours Required: 438

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Correctional Officer (Basic) (PSAV) (CORR)

Fall Semester CJK 0300 - Introduction to Corrections **33 Clock Hours** CJK 0305 - CJSTC Communications **42 Clock Hours** CJK 0310 - Officer Safety **12 Clock Hours** CJK 0315 - Facility and Equipment **12 Clock Hours** CJK 0320 - Intake and Release **18 Clock Hours** CJK 0325 - Supervising in a Correctional Facility **42 Clock Hours** CJK 0330 - Supervising Special Populations **21 Clock Hours** CJK 0335 - Responding to Incidents and Emergencies **18 Clock Hours** CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours** CJK 0040 - CMS Firearms **81 Clock Hours** CJK 0051 - Defensive Tactics **81 Clock Hours** CJK 0340 - Corrections PSAV Physical Fitness **30 Clock Hours** **Total Semester Clock Hours: 438**
Total Program Clock Hours: 438

Law Enforcement Officer (Basic) (PSAV)

Admission Program of Study Code LEOB
State CIP Code 0743010700

Entry into Criminal Justice Certificate Programs requires meeting the standards as established by the Criminal Justice Standards and Training Commission and the Florida Department of Law Enforcement for employment. A copy of these requirements will be furnished by the Public Safety Division at NWF State College.

Core Courses

CJK 0001 - Introduction to Law Enforcement

12 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to law enforcement, the process for becoming a certified law enforcement officer, and the requirements of the academy program. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0012 - Legal

63 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to the criminal justice system, the chain-of-command system in law enforcement, Constitutional Law, Florida Statutes, and the Police Code of Ethics. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0013 - Interactions in a Diverse Community

42 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enhance student awareness and understanding of human diversity issues and to teach students skills to enable them to effectively interact with people of diverse backgrounds. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0014 - Interviewing and Report Writing

54 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to help the student learn vital communication skills including interviewing, note-taking, statement taking, and report writing. It also helps the student to develop survival skills, stress management skills, and problem solving skills utilizing the SECURE model. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

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CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

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CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0064 - Fundamentals of Patrol

36 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to understand Community Oriented Policing and how it is implemented as a problem solving model, and identify the SECURE problem solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, maintain mental and physical fitness; respond to a call, approach a suspect, make an arrest, transport a prisoner and process the prisoner at a detention facility; and understand how to direct traffic, how to enforce traffic citations, identify how to respond to alarms and conduct a building search, and search inventory and impound vehicles. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0065 - Calls for Service

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to respond to calls for service, disturbances, people in distress and court orders. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0077 - Criminal Investigations

51 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond appropriately to a person or property crime victim, witness, and suspect; conduct a preliminary investigation on crimes against persons and crimes against property offenses; conduct a follow-up investigation to establish a suspect's identity and/or ascertain facts of the case; and, give testimony in different types of court proceedings. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0078 - Crime Scene to Courtroom

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond to a crime scene, protect and survey a crime scene, process a crime scene, dust for latent prints, and document a crime scene by sketching. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0084 - DUI Traffic Stops

33 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective DUI stops, including identifying a driver under the influence of alcohol and drugs, conducting field sobriety tests, and completing a DUI investigation. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0087 - Traffic Stops

30 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective traffic stops, including ethical consideration, safety considerations, citation and warning procedures, and dealing with abandoned vehicles. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0088 - Traffic Crash Investigations

33 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0092 - Critical Incidents

45 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to identify the crowd control procedures to safely and effectively disperse or control a large group of people; understand local emergency response plans; respond to a bomb threat, assesses the scene, search and evacuate a building or suspected bomb sight, identify Weapons of Mass Destruction and properly respond to a WMD incident. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0096A - Criminal Justice Physical Fitness I

31 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0096B - Criminal Justice Physical Fitness II

32 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 801

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Law Enforcement Officer (Basic) (PSAV) LEOB)

Fall Semester

CJK 0001 - Introduction to Law Enforcement **12 Clock Hours**

CJK 0012 - Legal **63 Clock Hours**

CJK 0013 - Interactions in a Diverse Community **42 Clock Hours**

CJK 0014 - Interviewing and Report Writing **54 Clock Hours**

CJK 0064 - Fundamentals of Patrol **36 Clock Hours**

CJK 0065 - Calls for Service **36 Clock Hours**

CJK 0077 - Criminal Investigations **51 Clock Hours**

CJK 0078 - Crime Scene to Courtroom **36 Clock Hours**

CJK 0020 - Law Enforcement CMS Vehicle Operations **48 Clock Hours**

CJK 0040 - CMS Firearms **81 Clock Hours**

CJK 0096A - Criminal Justice Physical Fitness I **31 Clock Hours**

CJK 0096B - Criminal Justice Physical Fitness II **32 Clock Hours**

CJK 0031 - CMS First Aid for Criminal Justice Officers **48 Clock Hours**

Total Semester Clock Hours: 549

Spring Semester

CJK 0092 - Critical Incidents **45 Clock Hours**

CJK 0087 - Traffic Stops **30 Clock Hours**

CJK 0084 - DUI Traffic Stops **33 Clock Hours**

CJK 0088 - Traffic Crash Investigations **33 Clock Hours**

CJK 0051 - Defensive Tactics **81 Clock Hours**

CJK 0422 - Dart-Firing Stun Gun **9 Clock Hours**

CJK 0096C - Criminal Justice Physical Fitness III **21 Clock Hours**

Total Semester Clock Hours: 252

Total Program Clock Hours: 801

Customer Relationship Management

Associate in Science

Customer Relationship Management (AS)

Admission Program Objective Code CUST
State CIP Code 1252020700

Pending Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) approval, this program will no longer be admitting new students beginning with the Spring 2019 semester.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Total Core Credits Required: 30

Technical Elective Courses

Select 12 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

(can be completed two times for credit)

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Customer Relationship Management (AS) (CUST)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** GEB 1011 - Introduction to Business **3 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester OST 2401 - General Office Management **3 Credit Hours** Mathematics General Education **3 Credit Hours** Natural Science General Education **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester GEB 2430 - Business Ethics **3 Credit Hours** MAR 2011 - Introduction to Marketing **3 Credit Hours** MNA 1161 - Customer Service **3 Credit Hours** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours**

Total Semester Hours: 15
Spring Semester MNA 2100 - Organizational Behavior **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** ENC 2210 - Technical Report Writing **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Cyber Security

Associate in Science

Cyber Security (AS)

Admission Program Objective Code CYBE
State CIP Code 1511100307

Students who successfully complete selected courses from this program of study may be eligible to receive the Database and E-Commerce Security (CCC) certificate (State CIP Code 0511100311).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases

and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Cyber Security (AS) (CYBE)
First Year
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CGS 2541 - Introduction to Database Concepts **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester CET 2880C - Digital Forensics Fundamentals **3 Credit Hours** CTS 1106 - Fundamentals of UNIX **3 Credit Hours** Science General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester CTS 2314C - Network Defense and Countermeasures **3 Credit Hours** CIS 2352C - Ethical Hacking Fundamentals **3 Credit Hours** Social Science General Education **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

College Credit Certificate

Database and E-Commerce Security (CCC)

Admission Program Objective Code DECS
State CIP Code 0511100311

Students who successfully complete this certificate may be eligible to receive credits towards the Cyber Security (AS) degree (State CIP Code 1511100307).

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 15

Technical Elective Courses

Select 3 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1843 - Introduction to E-Commerce

3 Credit Hours
(Offered as needed)

This course is designed to provide students with an overview of the dynamics of electronic commerce and how it links information technology to business objectives. Course may not transfer to all State University System institutions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 3

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Database and E-Commerce Security (CCC) (DECS)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CGS 2541 - Introduction to Database Concepts **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Dental Assisting

Vocational Certificate

Dental Assisting (PSAV)

Admission Program of Study Code DENT
State CIP Code 0351060112

Basic Skills Requirements: The student must be exempt or attain a **10th grade level** on each section of the TABE exam: Math, Language and Reading.

This program is a Limited Admission program subject to additional program policies and requirements stipulated in the "Dental Assisting Student Handbook." The admission criteria and process, as well as some course numbers and credits are subject to change; students should contact the Dental Assisting program office for the most current information.

The Dental Assisting program is accredited by the Commission on Dental Accreditation and has been granted accreditation status of approval without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Avenue, Chicago, IL 60611-2678. The Commission's web address is: http://www.ada.org/100.aspx.

Students who successfully complete this program and pass the Dental Assisting National Board (DANB) Certificate (CDA) may apply 21 credits towards the Technical Elective requirements for the Health Services Management (AS) degree (State CIP Code 135070100).

Core Courses

DEA 0020 - Pre-Clinical Procedures Theory

60 Clock Hours
(Offered as needed)

This course is designed to provide an introduction to the dental assisting profession to include orientation to four handed dentistry and general dental office procedures including, but not limited to basic principles of disease prevention, patient data collection and assessment, and instrumentation. Emphasis is on adhering to safety guidelines as specified by OSHA.

Corequisite(s): DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DEA 0020L - Pre-Clinical Practice Lab

90 Clock Hours
(Offered as needed)

This is a comprehensive chair side competency based course. The course provides the skills practice necessary for dental assisting students entering four handed dentistry practice including but not limited to infection control, taking and recording vital signs, assisting with operative procedures, principles of preventive dentistry, instrument identification, and use and maintenance of equipment. Emphasis is on aseptic technique and clinical competency with procedures performed in a contemporary dental practice.

Corequisite(s): DEA 0020, DES 0103L.

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DEA 0130 - Oral Pathology

30 Clock Hours
(Offered as needed)

This course is a general study of the scientific and clinical concepts that include additional knowledge base necessary to the practice of dental assisting. Students will study the normal and abnormal conditions of the oral cavity such as dental caries prevention, the dental caries process and recognition of various common pathological conditions. Oral pathology, histology and embryology are included. Emphasis is on the interrelationship of the information presented with the clinical practice of dental assisting.

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DEA 0803L - Clinical Practice I

150 Clock Hours
(Offered as needed)

This competency based clinical course provides a real world setting in which to integrate the laboratory and clinical skills learned in the classroom. The student receives closely supervised hands on training in chair side dental assisting through rotations at community dental offices. Progress is evaluated using predetermined competency guidelines. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 90 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Corequisite(s): DEA 0020, DEA 0020L.

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DES 0830 - Expanded Function Theory

30 Clock Hours
(Offered as needed)

This course introduces the dental assisting student to the dental specialty practices and more advanced clinical skills. It also provides the theory of dental specialty practice administration as it relates to the role of the dental assistant including ethical and legal ramifications. Lectures relate topics including but not limited to dental specialty procedures, instruments used in the specialty practices and duties delegated to dental assistants according to the rules and regulations of the Florida Dental Practice Act. Role playing and problem solving activities using case studies relate to duties delegated to dental assistants.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830L.

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DES 0830L - Expanded Functions Lab

60 Clock Hours
(Offered as needed)

This laboratory course accompanies the clinical practice lecture course DES 0830 and provides opportunity for students to practice application of the duties delegated to dental assistants according to the Florida Dental Practice Act. Students become more proficient in more advanced skills. Competencies containing information and behavioral objectives allow students to master each skill before advancing to the next.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830.

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DEA 0852L - Clinical Practice II

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice I. It provides a real world setting for students to receive additional training in the clinical skills learned in class. Students are assigned to various offices in the community including but not limited to general dentists, oral surgeons, orthodontists, periodontists, and endodontists. Performance evaluations are utilized to measure competency and provide feedback from the local dental offices to the instructor regarding the students' competency level. Skills are strengthened in Seminar Lab. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 150 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DES 0400

Corequisite(s): DES 0830, DES 0830L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DEA 0936 - Dental Assisting Seminar

60 Clock Hours
(Offered as needed)

This course is designed to provide a review of materials commonly covered on the Dental Assisting National Board (DANB) Exam. Topics include but are not limited to infection control, general chair side procedures, and radiographic technique. The seminar will provide a mock board examination, and opportunities for review, problem solving, and strengthening skills. The course also serves as an opportunity for feedback from students' Clinical Practice.

Prerequisite(s): DEA 0852L, DEA 0803L, DES 0205, DES 0205L

Corequisite(s): DEA 0803L, DES 0206L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0103 - Dental Materials

60 Clock Hours
(Offered as needed)

This course is a comprehensive study of the theory of manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. The competency based lab that accompanies this course includes exercises to illustrate application and use of selected materials. Students will study various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, as well as acrylic plastics. Students will become familiar with various pieces of dental laboratory equipment and their uses.

Corequisite(s): DES 0103L, DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0103L - Dental Materials Lab

90 Clock Hours
(Offered as needed)

This course is a comprehensive study of the manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. Emphasis is on practical application as it relates to the role of the dental assistant in the contemporary dental practice. It is a competency based lab that accompanies the theory course and includes exercises to illustrate application and uses of selected materials. Students practice the use of various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, and acrylic plastics.

Corequisite(s): DES 0103, DEA 0020L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0205 - Dental Radiology Lecture

60 Clock Hours
(Offered as needed)

This course is designed to introduce the theory, application and principles of radiographic exposure and processing techniques used in dentistry. Students will receive instruction including but not limited to historical data, radiation safety, exposure, processing, mounting and error prevention. Image interpretation of radiographic anatomical

structures will be included.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0205L - Dental Radiology Laboratory I

60 Clock Hours
(Offered as needed)

This laboratory course assists students in radiographic performance techniques using DXTR manikins to achieve competency prior to exposure of various patients with varied dentitions. Students practice exposing, mounting, radiographic interpretation, safe darkroom procedures, identification of landmarks and distinguishing radiographic pathology from normal landmarks. Clinical radiographic skills necessary to produce diagnostic quality radiographs including bitewings, periapical radiographs, and panoramic x-rays will be covered. Emphasis is on patient and operator safety guidelines and producing diagnostic quality radiographs.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205.

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DES 0206L - Dental Radiology Laboratory II

60 Clock Hours
(Offered as needed)

This laboratory course assists students in additional radiographic performance techniques to include surveys on patients with varied dentitions. Students practice more advanced radiographic exposure techniques, interpretation, additional darkroom procedures, identification of landmarks and distinguishing various radiographic pathology. Clinical radiographic skills necessary to produce diagnostic quality x-rays including but not limited to bitewings, periapical radiographs, and panoramic surveys on actual patients will be covered. Emphasis is placed on patient and operator safety guidelines and producing diagnostic quality radiographs during this course.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L, DES 0205L

Corequisite(s): DEA 0851L.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0324 - Interpersonal Communications Skills

30 Clock Hours
(Offered as needed)

This course is designed to implement interpersonal and effective communication skills in the practice of dentistry. It includes team building strategies, oral and written communications skills with the correct use of terminology commonly used in dentistry. Professionalism in verbal and nonverbal communications is emphasized. Students will be introduced to the legal and ethical scope of responsibilities for dental assistants and interpersonal relations in the dental office. Providing oral health instructions and post operative instructions for patients will be introduced. Scenario-based role playing is used to augment student learning of course content.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0400 - Dental Anatomy

90 Clock Hours
(Offered as needed)

This course provides a detailed study of the orofacial and related structures of the head and neck including, but not limited to the eruption, identification and function of the human dentition, study of bony, circulatory, muscular and nervous systems of the head, neck and surrounding structures associated with the oral cavity. A brief introduction to oral histology and embryology will be included.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0501 - Dental Practice Management

60 Clock Hours
(Offered as needed)

This course includes theory and content relating to practical administrative duties performed in the dental office. Lectures and role playing activities are related to the responsibilities of the dental assistant. Topics include but are not limited to appointment scheduling, billing, collections, record keeping, clerical and dental supply inventory. Students are introduced to the use of dental practice software with hands on computer experience. Legal responsibilities, interpersonal relations, and interview skills are included.

Prerequisite(s): DES 0205, DES 0205L

Corequisite(s): DEA 0936.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an

approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0602 - Pharmacology and Dental Office Emergencies

30 Clock Hours
(Offered as needed)

This course is designed to familiarize the dental assisting student with the basic concepts and considerations regarding pharmacology and pharmaceutics used in dentistry. Topics presented include nitrous oxide monitoring, emergency procedures and protocol. Lectures will include recognition of emergency conditions in the dental office, not limited to syncope, anaphylaxis, and cardiovascular incidents. Emphasis is placed on the role of the dental assistant in the prevention and management of dental office emergencies.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0844 - Infection Control for Dental Assistants

30 Clock Hours
(Offered as needed)

This course is a general study in biomedical sciences of preventive dentistry to familiarize the dental assisting student with basic principles of microbiology, basic body structures, and their functions and effects as manifested in the oral cavity. The course also covers the effects of nutrition and the role of microorganisms in dental health and blood borne pathogens.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 1230

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Dental Assisting (PSAV) (DENT)
Fall Semester DEA 0020 - Pre-Clinical Procedures Theory **60 Clock Hours**

DEA 0020L - Pre-Clinical Practice Lab **90 Clock Hours**

DES 0400 - Dental Anatomy **90 Clock Hours**

DES 0103 - Dental Materials **60 Clock Hours**

DES 0103L - Dental Materials Lab **90 Clock Hours**

DEA 0803L - Clinical Practice I **150 Clock Hours**

DES 0324 - Interpersonal Communications Skills **30 Clock Hours**

DES 0844 - Infection Control for Dental Assistants **30 Clock Hours ***

Total Semester Clock Hours: 450

Spring Semester

DES 0830 - Expanded Function Theory **30 Clock Hours**

DES 0602 - Pharmacology and Dental Office Emergencies **30 Clock Hours**

DES 0830L - Expanded Functions Lab **60 Clock Hours**

DEA 0852L - Clinical Practice II **180 Clock Hours**

DES 0205 - Dental Radiology Lecture **60 Clock Hours**

DES 0205L - Dental Radiology Laboratory I **60 Clock Hours**

DEA 0130 - Oral Pathology **30 Clock Hours**

Total Semester Clock Hours: 420

Summer Semester

DEA 0851L - Clinical Practice III **180 Clock Hours**

DES 0501 - Dental Practice Management **60 Clock Hours**

DEA 0936 - Dental Assisting Seminar **60 Clock Hours**

DES 0206L - Dental Radiology Laboratory II **60 Clock Hours**

Total Semester Clock Hours: 360

Total Program Clock Hours: 1230

* DES0844 may be taken in Fall or Spring Semester

Digital Media/Multimedia Technology

Associate in Science

Digital Media/Multimedia Technology (AS)

Admission Program Objective Code DMMT
State CIP Code 1611080103

The Digital Media/Multimedia programs are intended for students interested in working in commercial art fields that include electronic publishing, digital video production, and website development.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Digital Media/Multimedia Authoring (CCC) (State CIP Code 0609070209) and/or Digital Media/Multimedia Presentation (CCC) (State CIP Code 0609070209).

Students are encouraged, but not required, to contact Digital Media faculty at 729-6019 for detailed advising to plan a program of study before enrolling in courses.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and

arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2141C - Multimedia II

4 Credit Hours
(Offered as needed)

An advanced course covering principles of design and information architecture surrounding interactive multimedia presentations. Students will learn an industry standard interactive DVD media authoring software application. Students will produce a finished interactive DVD.

Prerequisite(s): GRA 2140C.

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits (GRA, PGY) _

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Technology (AS) (DMMT)	Companion Certificate*	
First Year	DMMA	DMMP
Fall Semester		
PGY 1801C - Digital Photography I **4 Credit Hours**	√	√
GRA 1151C - Illustration I **3 Credit Hours**	√	√
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		

Mathematics General Education 3 **Credit Hours** Additional General Education **2 Credits** **Total Semester Hours: 15**		
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** ARH 1000 - Art Appreciation **3 Credit Hours ❖ † ♦ ¶** GRA 2190C - Graphic Design I **3 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** **Total Semester Hours: 14**	√	√
Summer Semester Social Science General Education **3 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** **Total Semester Hours: 7**		
Second Year		
Fall Semester GRA 2140C - Multimedia I **4 Credit Hours** ART 2603C - Digital Imaging II **4 Credit Hours** Science General Education **4 Credit Hours** **Total Semester Hours: 12**	√	√ √
Spring Semester CGS 2820 - Web Design **3 Credit Hours** GRA 2141C - Multimedia II **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** PGY 2221C - Commercial Photography II **4 Credit Hours** **Total Semester Hours: 12**	√	√

Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: DMMA - Digital Media/Multimedia Authoring (CCC) DMMP - Digital Media/Multimedia Presentation (CCC)		

College Credit Certificate

Digital Media/Multimedia Authoring (CCC)

Admission Program of Study Code DMMA
State CIP Code 0609070209

Students who successfully complete this diploma may be eligible to receive credits towards the Digital Media/Multimedia Technology (AS) degree (State CIP Code 1611080102).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-

based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 14

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Authoring (CCC) (DMMA)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** **Total Semester Hours: 7**
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** CGS 2820 - Web Design **3 Credit Hours** T**otal Semester Hours: 7**
Total Program Credits: 14

Digital Media/Multimedia Presentation (CCC)

Admission Program of Study Code DMMP
State CIP Code 0609070219

Students who successfully complete this diploma may be eligible to receive credits towards the Digital Media/Multimedia Technology (AS) degree (State CIP Code 1611080102).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Media/Multimedia Presentation (CCC) (DMMP)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** **Total Semester Hours: 11**
Spring Semester CGS 2820 - Web Design **3 Credit Hours** GRA 2140C - Multimedia I **4 Credit Hours** **Total Semester Hours: 7**
Total Program Hours: 18

Drafting Design Technology

Associate in Science

Computer-Aided Drafting and Design - Mechanical Design Option (AS)

Admission Program Objective Code CAD
State CIP Code 1615130102

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Computer-Aided Technical Design Certificate (CCC) (State CIP Code 0615130204) and/or Advanced Computer-Aided Technical Design Certificate (CCC) (State CIP 0615130101).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands,

advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 19

Technical Elective Courses

Select 25 credits from the following:

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETD 2218 - Geometric Dimensioning and Tolerancing

4 Credit Hours
(Fall, Summer)

An introductory course in geometric dimensioning and tolerancing using the geometric method nationally accepted according to ASMEY 14.5M. Topics covered include: definition and terms, symbols, datum referencing, locational tolerancing, form tolerancing, profile tolerancing, orientation and runout tolerancing, and math for positional tolerancing.

Prerequisite(s): ETD 1217 or equivalent.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

ETD 2735 - Mechanical Drafting III

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include: isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, and precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 2218 and ETD 2731 or equivalent.

Total Technical Elective Credits Required: 25

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer-Aided Drafting and Design - Mechanical Design Option (AS) (CAD)	Companion Certificate*	
First Year	CATD	ACAT
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours**	√	√

ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 13**	 √ 	√ √
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 1112 - Mechanical Drafting I **4 Credit Hours** ETD 2218 - Geometric Dimensioning and Tolerancing **4 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 14**	 √ 	 √ √
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 2731 - Mechanical Drafting II **4 Credit Hours** Social Science General Education **3 Credit Hours** **Total Semester Hours: 10**	 √ 	 √ √
Second Year		
Fall Semester ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** ETD 2735 - Mechanical Drafting III **4 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** Mathematics General Education **3 Credit Hours** **Total Semester Hours: 13**	 √ 	
Spring Semester ETD 2357C - Inventor I **3 Credit Hours** ETD 2368C - SolidWorks II **3 Credit Hours**	 	

Science General Education **4 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 13**		
Total Program Hours: 62		
* Courses with √ can also be used in the Companion Certificate indicated: CATD-Computer-Aided Technical Design Certificate (CCC) ACAT-Advanced Computer-Aided Technical Design Certificate (CCC)		

Computer-Aided Drafting and Design - Technical Illustration Option (AS)

Admission Program Objective Code CADI
State CIP Code 1615130102

The purpose of this program is to prepare students for employment as technical illustrators. Technical illustrators are typically responsible for 2D and 3D illustrations for use in technical documents and service manuals. Technical illustrators work in conjunction with engineers and technical writers to gather information that would be conveyed into technical drawings. Drawing software can include AutoCAD, Inventor, Solidworks, Isodrraw, PhotoShop, Illustrator or other software.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Computer-Aided Technical Design Certificate (CCC) (State CIP Code 0615130204).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and

systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 19

Technical Elective Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

ETD 1801C - Technical Illustration

3 Credit Hours
(Fall)

The purpose of this course is to help students develop the skills, knowledge, and attitudes necessary to be job entry-level qualified as technical illustrators.

Prerequisite(s): ETD 1112 or EGN 1130C, and ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

ETD 2802C - Technical Illustration II

3 Credit Hours
(Spring)

The purpose of this course is to help students develop advanced skills, knowledge, and attitudes necessary as technical illustrators, to include oblique, and axiometric projections, perspective and exploded pictorial drawings, and related techniques.

Prerequisite(s): ETD 1340C or equivalent.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 25

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Computer-Aided Drafting and Design - Technical Illustration Option (AS) **(CADI)**	Companion Certificate*
First Year	CATD
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours**	√ √

Total Semester Hours: 13	
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 2357C - Inventor I **3 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 12**	√
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1801C - Technical Illustration **3 Credit Hours** GRA 1152C - Illustration II **3 Credit Hours** Social Science General Education **3 Credit Hours** **Total Semester Hours: 12**	√
Second Year	
Fall Semester ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** ETD 2802C - Technical Illustration II **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** Mathematics General Education **3 Credit Hours** **Total Semester Hours: 12**	√
Spring Semester ETD 2371C - 3D Printing I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** Science General Education **4 Credit Hours** Humanities General Education **3 Credit Hours** **Total Semester Hours: 14**	

Total Program Hours: 62	
* Courses with √ can also be used in the Companion Certificate indicated: CATD-Computer-Aided Technical Design Certificate (CCC)	

College Credit Certificate

Advanced Computer-Aided Technical Design Certificate (CCC)

Admission Program of Study Code ACAT
State CIP Code 0615130101

Students who successfully complete this certificate may be eligible to receive credits towards the Computer-Aided Drafting and Design - Mechanical Design Option (AS) degree (State CIP Code 1615130102).

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include: dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Advanced Computer-Aided Technical Design Certificate (CCC) (ACAT)
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** ETD 1217 - Fundamentals of Dimensioning and Tolerancing **4 Credit Hours** **Total Semester Hours: 10**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 1112 - Mechanical Drafting I **4 Credit Hours** **Total Semester Hours: 7**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 2731 - Mechanical Drafting II **4 Credit Hours** **Total Semester Hours: 7**
Total Semester Hours: 24

Computer-Aided Technical Design Certificate (CCC)

Admission Program of Study Code CATD
State CIP Code 0615130204

Students who successfully complete this certificate may be eligible to receive credits towards the Computer-Aided Drafting and Design - Mechanical Design Option (AS) degree (State CIP Code 1615130102) and the Computer-Aided Drafting and Design - Technical Illustration Option (AS) (State CIP Code 1615130102).

Core Courses

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Computer-Aided Technical Design Certificate (CCC) (CATD)
Fall Semester ETD 1102 - Introduction to Technical Drawing **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 15

Early Childhood Education

Associate in Science

Early Childhood Education (AS)

Admission Program Objective Code ECED
State CIP Code 1413121004

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Child Development Early Intervention (CCC) (State CIP Code 0419070904), Child Care Center Management Specialization (CCC) (State CIP Code 0419070906), Infant/Toddler Specialization (CCC) (State CIP Code 0419070907), and/or Preschool Specialization (CCC) (State CIP Code 0419070908).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**

- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1401 - The Family In Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

This course is comprehensive in scope, emphasizing skills and concepts of parenting which include: adjustment to parental roles; parent-child communication, care, growth, and development of children; cultivating strong families; special concerns; alternative family structures; educational institutions working effectively with parents; and agencies and legislation affecting children and parents.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is

under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Early Childhood Education (AS) (ECED)	Companion Certificates*			
First Year	CDEI	CCCM	CITS	CCPS
Fall Semester EEC 1001 - Introduction to Early Childhood Ed **3 Credit Hours** EEC 1309 - Early Childhood Education Foundations **3 Credit Hours** EEC 1201 - Infants and Toddlers **3 Credit Hours** EEX 2010 - Introduction to Exceptional Children **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 15**	√ √ √ √	√ √	√ √	√ √
Spring Semester DEP 2100 - Child Growth and Development **3 Credit Hours** EEC 1949 - Internship, Early Childhood Education **3 Credit Hours** EEC 1401 - The Family In Early Childhood Education **3 Credit Hours** Mathematics General Education **- 3 Credit Hours** **Total Semester Hours: 12**	√ √	√	√ √	√ √
Summer Semester Science General Education **- 4 Credit Hours** Humanities General Education - **3 Credit Hours** **Total Semester Hours: 7**				
Second Year				

Fall Semester EEC 1601 - Assessment in Early Childhood Education **3 Credit Hours** EEC 2732 - Child Nutrition, Health and Safety **3 Credit Hours** EEC 1750 - Guidance for Young Children **3 Credit Hours** EEC 2220 - Language and Literacy Instruction In Early Childhood Education **3 Credit Hours** Additional General Education Credits **- 2 Credit Hours** **Total Semester Hours: 14**	√ √ √ √			
Spring Semester EEC 1002 - Early Childhood Program Administration **3 Credit Hours** EDF 1005 - Introduction to the Teaching Profession **3 Credit Hours** EEC 2222 - Math & Sci Instruction Early Child Ed **3 Credit Hours** Social Science General Education - **3 Credit Hours** **Total Semester Hours: 12**	√ √	√		
Total Program Hours: 60				
* Courses with √ can also be used in the Companion Certificate indicated: CDEI - Child Development Early Intervention (CCC) CCCM - Child Care Center Management Specialization (CCC) CITS - Infant/Toddler Specialization (CCC) CCPS - Preschool Specialization (CCC)				

College Credit Certificate

Child Care Center Management Specialization (CCC)

Admission Program of Study Code CCCM
State CIP Code 0419070906

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

Total Program Credits Required: 12

Child Development Early Intervention (CCC)

Admission Program of Study Code CDEI
State CIP Code 0419070904

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

Total Core Credits Required: 36

Total Program Credits Required: 36

Infant/Toddler Specialization (CCC)

Admission Program of Study Code CITS
State CIP Code 0419070907

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the

NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

Total Core Credits Required: 12

Total Program Credits Required: 12

Preschool Specialization (CCC)

Admission Program of Study Code CCPS
State CIP Code 0419070908

Students who successfully complete this certificate may be eligible to receive credits towards the Early Childhood Education A.S. degree (State CIP Code 1413121004).

Core Courses

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting)

as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

Total Core Credits Required: 12

Total Program Credits Required: 12

Emergency Administration and Management

Associate in Science

Emergency Administration & Management (AS)

Admission Program Objective Code EAMT
State CIP Code 1743030200

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificates in Emergency Administrator & Manager (CCC) (State CIP Code 0743030201) and/or Homeland Security Emergency Manager (CCC) (State CIP Code 0743030202).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits 3 **Credit Hours**

Total General Education Credits Required: 18

Core Courses

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

FFP 2823 - Technical Applications in Emergency Management

3 Credit Hours
(Offered as needed)

This course explores issues and problems associated with the use of technology in emergency management. It examines strategies to overcome these issues and problems. Some of the subjects treated are use of the Internet, spatial analysis applications in vulnerability analysis, decision support systems, and emerging technologies.

FFP 2841 - Contingency Planning for the Private Sector

3 Credit Hours
(Offered as needed)

This course is designed to assist students in developing effective public sector plans by using the National Incident Management System and the Incident Command System templates. The curriculum includes case studies and development procedures for private sector logistics management and employee support planning.

FFP 2834 - Societal Issues in Disaster Management

3 Credit Hours
(Offered as needed)

This course examines human response to disaster events, including political and economic factors influencing vulnerability. It examines how individuals and institutions make decisions at all levels of disaster response, it is an introduction to current research pertaining to the sociological aspects of disaster, and it will provide increased awareness of the potential and difficulties in using social science research as a basis for modifying public policy.

Total Core Credits Required: 15

Technical Elective Courses

Select 27 credits from the following:

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) _

Total Technical Elective Credits Required: 27

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Emergency Administration & Management (AS) (EAMT)	Companion Certificates*	
First Year	ENAM	HSEM
Fall Semester FFP 1801 - Introduction to Emergency Management Administration **3 Credit Hours** FFP 2820 - Emergency Preparedness **3 Credit Hours** General Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Spring Semester Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours**		

General Education Course **3 Credit Hours** General Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Second Year		
Fall Semester FFP 2823 - Technical Applications in Emergency Management **3 Credit Hours** FFP 2841 - Contingency Planning for the Private Sector **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** Technical Education Course **3 Credit Hours** **Total Semester Hours: 15**		
Spring Semester FFP 2834 - Societal Issues in Disaster Management **3 Credit Hours** Technical Education Course **3 Credit Hours** General Education Course **3 Credit Hours** General Education Course **4 Credit Hours** General Education Course **2 Credit Hours** **Total Semester Hours: 15**		
Total Program Hours: 60		
* Courses with √ can also be used in the Companion Certificate indicated: ENAM - Emergency Administrator and Manager (CCC) HSEM - Homeland Security Emergency Manager (CCC)		

Fire Science Technology (AS)

Admission Program of Study Code FSCI

State CIP Code 1743020112

The Fire Science Technology Associate in Science degree program offers students a sequence of courses designed to provide relevant technical knowledge needed to prepare students for entry or advancement in the fire service or in

a related fire protection field. A technical certificate, Fire Officer Supervisor (6455) (T.C.), is included as an option within this degree program. Students may pursue the A.S. degree and earn the technical certificate while completing the requirements for the degree, or pursue the certificate to develop or upgrade their skills. Contact an advisor or counselor to determine the career education path that is best for you.

Career Opportunities
In addition to community fire departments, there are opportunities in government installations such as airports, as well as private fire-fighting companies. There is also a need for inspectors, investigators, forest rangers and smoke jumpers. In all cases, employment is based on high test scores and outstanding skills.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2720 - Company Officer

3 Credit Hours
(Fall, Spring, Summer)

Designed to assist fire officers in solving the varied problems and situations they will be required to manage effectively in today's ever changing fire service. The curriculum includes a review of fire department organization and administration, management theory, leadership, communication, motivation, and small group dynamics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2780 - Fire Department Administration

3 Credit Hours
(Fall, Spring, Summer)

The course is designed to present the principles of management theory, and its application in the fire service. The course is intended for officers whose area of responsibility encompasses long and short range planning, budgeting and administration.

Prerequisite(s): FFP 0010 and FFP 0020

Total Core Credits Required: 30

Technical Elective Courses

Select 15 credits from the following:

(Contains 15 hours articulation for Firefighter/Emergency Medical Technician-Combined (PSAV))

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.
And

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

College Credit Certificate

Emergency Administrator & Manager (CCC)

Admission Program of Study Code EMAM
State CIP Code 0743030201

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) (State CIP Code 1743030200).

Core Courses

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) **3 Credit Hours**

Total Core Credits Required: 24

Total Program Credits Required: 24

Fire Officer Supervisor (CCC)

Admission Program of Study Code FSUP

State CIP Code 0743020111

Earning this certificate increases management skills for professionals employed as Fire Fighters. The purpose of this certificate is to prepare students for employment as Firefighting and Prevention Supervisors to supervise Fire Fighters who control and extinguish fires, protect life and property, and conduct rescue efforts. The program is beneficial to professionals seeking career field enhancement. This program does not prepare students for certification as Fire Fighters. A student must successfully complete the basic recruit program in firefighting to become certified, pursuant to Chapter 633, Florida Statutes. This program does not complete the requirements to be eligible to sit for Bureau of Fire Standards and Training (BFST) certification exams. A student must contact the Bureau of Fire Standards and Training (BFST) for additional requirements.

Core Courses

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of

media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

Total Program Credits Required: 12

Homeland Security Emergency Manager (CCC)

Admission Program of Study Code HSEM
State CIP Code 0743030202

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration and Management A.S. degree (State CIP Code 1743030200).

Core Courses

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework

(NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies

necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

- ____ ____ College Credit Electives (CCJ1, CJT1, CJT2, CJD1, CJD2, CJL, DSC, ETI, FFP1, FFP2, GIS) **3 Credit Hours**

Total Program Credits Required: 24

Vocational Certificate

Firefighter I/II (PSAV)

Admission Program of Study Code FIRN
State CIP Code 0743020303

Entry into the Firefighting Certificate Program requires meeting the standards established by the Florida Division of State Fire Marshal, Bureau of Fire Standards and Training. A copy of these requirements is available through the Public Safety Division of NWF State College.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) degree (State CIP Code 1743030200).

Core Courses

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 398

Corequisite Course

FFP 0077 - First Responder for Public Safety Personnel

45 Clock Hours
(Fall, Spring, Summer)

This course trains public safety members who are the first to arrive at an emergency in providing efficient and accurate pre-hospital care. Students assess patients for wounds to determine if trauma, shock, burns or closed airways are a problem and how to address those issues by dressing wounds, stabilizing the person or administering oxygen. They immobilize patients and address common emergency medical issues with basic treatments. This course includes hands-on, practical experience and is necessary to be eligible for first responder certification.

This course is a co-requisite course for students entering the Firefighting Certificate program who do not have certification for first responder, EMT, or paramedic.
*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Fire Fighter (Basic) (PSAV) (FIRE)
Fall Semester FFP 0010 - Firefighting I **206 Clock Hours** FFP 0020 - Firefighting II **192 Clock Hours** FFP 0077 - First Responder for Public Safety Personnel **45 Clock Hours** * **Total Semester Clock Hours: 398**
Total Program Hours: 398

* FFP0077 is a program corequisite unless student is a First Responder, Paramedic or EMT

Firefighter/Emergency Medical Technician-Combined (PSAV)

Admission Program of Study Code FIEM
State CIP Code 0743020312

Basic Skills Requirements: The student must be exempt or attain a **10th grade level** on each section of the TABE exam: Math, Language and Reading.

Entry into the Firefighter/Emergency Medical Technician-Combined Program requires meeting the standards established by the Florida Division of State Fire Marshal, Bureau of Fire Standards and Training. A copy of these requirements is available through the Public Safety Division of NWF State College.

Firefighters are trained to extinguish and control fires in response to situations where property, life, or the environment is in danger. At the scene of an emergency, firefighters perform tasks assigned by their commanding officer. Depending on the situation, they may need to provide medical attention, break through debris, operate fire hoses, or enter a burning building. Firefighters are often first responders to car accidents, heart attack scenes, and other medical emergencies that do not involve fire.

Graduates of this program will be eligible to apply for the examinations to become both a Florida Certified Emergency Medical Technician/National Registry Emergency Medical Technician Basic and Florida Fire Standards. This will allow graduates to obtain employment as a firefighter EMT after 2 semesters of training.

The Firefighter/EMT Certificate program is two semester program that consists of Firefighter standards and EMT training. Applicants to this program must have a high school diploma or GED and meet other applicable admission criteria. If the number of qualified applicants to the program exceeds the number of openings, students will be accepted using a combination of application points . Contact the Emergency Services Office at (850) 729-4924 for additional information.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Administration & Management (AS) degree (State CIP Code 1743030200).

Core Courses

EMS 0119 - Emergency Medical Technician for Firefighters

140 Clock Hours
(Fall, Spring, Summer)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director

Corequisite(s): FFP 0010, FFP 0020, EMS 0119L

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 0119L - Emergency Medical Technician Lab for Firefighters

160 Clock Hours
(Fall, Spring, Summer)

This course provides an integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director.

Corequisite(s): FFP 0010, FFP 0020, EMS 0119

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is

required.

Prerequisite(s): FFP 0010 or FFP 0077

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 698

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Firefighter/Emergency Medical Technician-Combined (PSAV)
Fall Semester FFP 0010 - Firefighting I **206 Clock Hours** FFP 0020 - Firefighting II **192 Clock Hours** **Total Semester Clock Hours: 398** **Spring Semester** EMS 0119 - Emergency Medical Technician for Firefighters **140 Clock Hours** EMS 0119L - Emergency Medical Technician Lab for Firefighters **160 Clock Hours** **Total Semester Clock Hours: 300**
Total Program Clock Hours: 698

Emergency Medical Services

Associate in Science

Emergency Medical Services (AS)

Admission Program Objective Code EMSR
State CIP Code 1351090402

This curriculum forms the last stage of a career ladder program progression from Emergency Medical Technician (CCC) (State CIP Code 0351090415) to Paramedic (CCC) (State CIP Code 0351090405) to Emergency Medical Services (AS) degree.

Students interested in pursuing this program must have a current and active Florida Bureau of Emergency Medical Services EMT/Paramedic licensure. Contact the Emergency Services/Paramedic program at (850) 729-4924 for more information.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences 3 **Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

*** BSC 2020C (from Paramedic Core) may be used to meet GE Science.**

EMT Certificate Courses

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

Total EMT Credits Required: 12

Paramedic Certificate Core Courses

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

EMS 1335 - Emergency Vehicle Operators Course

1 Credit Hour
(Offered as needed)

Students receive basic education and information on the safe and effective operation of emergency vehicles.

Prerequisite(s): permission of the EMS Program Director.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for

visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Paramedic Credits Required: 43

Total Program Credits Required: 73

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Emergency Medical Services (AS) (EMSR)	Companion Certificates*	
First Year	EMTB	EMPM
Summer Semester		
EMS 1119C - Emergency Medical Technician **6 Credit Hours**	√	
EMS 1335 - Emergency Vehicle Operators Course **1 Credit Hour**	√	
EMS 1401L - EMT Lab **6 Credit Hours**	√	
HSC 1531 - Medical Terminology **3 Credit Hours**		√
Total Semester Hours: 14		
Fall Semester		
BSC 2020C - Human Structure and Function **4 Credit Hours**		√
EMS 2231C - Paramedic Processes I **5 Credit Hours**		√
EMS 2435L - Paramedic Lab I **5 Credit Hours**		√
EMS 2552 - Advanced Cardiac Life Support (ACLS) **1 Credit Hour**		√
EMS 1337 - Defensive Tactics **1 Credit Hour**		√
Total Semester Hours: 16		
Spring Semester		
EMS 2232C - Paramedic Processes II **5 Credit Hours**		√
EMS 2436L - Paramedic Lab II **5 Credit Hours**		√
EMS 2526 - Twelve-Lead EKG Interpretation **1 Credit Hour**		√
EMS 2553 - Pediatric Advanced Life Support (PALS) **1 Credit Hour**		√
EMS 2555 - International Trauma Life Support (ITLS) **1 Credit Hour**		√
Elective - CCJ, EMS, FFP - **3 Credit Hours**		

Total Semester Hours: 16		
Second Year		
Summer Semester EMS 2438C - Advanced Clinical Internship **2 Credit Hours** EMS 2233 - Paramedic Processes III **2 Credit Hours** EMS 2425L - Paramedic Externship **4 Credit Hours** EMS 2342 - Advanced Extrication **1 Credit Hour** DSC 2055 - Issues in Disaster Response **1 Credit Hour** General Education Course - **3 Credit Hours** **Total Semester Hours: 13**		 √ √ √ √ √
Fall Semester General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **3 Credit Hours** General Education Course - **2 Credit Hours** Total Semester Hours: 14		
Total Program Hours: 73		
* Courses with √ can also be used in the Companion Certificate indicated: EMTB - Emergency Medical Technician (Basic) (CCC) EMPM - Paramedic (CCC)		

College Credit Certificate

Emergency Medical Technician (CCC)

Admission Program of Study Code EMTN
State CIP Code 0351090415

Admission will be through a Limited Access application process. Graduates of this program will be eligible to apply for the examination to become a Florida certified Emergency Medical Technician and a National Registry Emergency Medical Technician Basic. Students interested in pursuing this program should contact the Emergency Medical Services Office at (850) 729-4924.

Students who successfully complete this certificate may be eligible to receive credits towards the Emergency Medical Services (AS) degree (State CIP Code 1351090402).

Core Courses

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

Total Program Credits Required: 12

Paramedic (CCC)

Admission Program Objective Code EMPM
State CIP Code 0351090405

Admission will be through a Limited Access application process. Graduates will be eligible to sit for the Paramedic certification exam. The curriculum forms the core of the Emergency Medical Services A.S. degree (State CIP Code 1351090402). Students may "add on" general education credits and some college credit electives to the Paramedic certificate and earn the A.S. degree. Students interested in pursuing this program should contact the Emergency Medical Services Office at (850) 729-4924.

Core Courses

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 42

Engineering Technology

Associate in Science

Engineering Technology - Digital Design & Modeling Specialization Option (AS)

Admission Program Objective Code ETDD
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a

combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Computer-Aided Design and Drafting (CCC) (State CIP Code 0615000004), Rapid Prototyping Specialist (CCC) (State CIP Code 0615000012) and/or Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands,

advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools,

advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Digital Design & Modeling Specialization Option (AS) (ETDD)	Companion Certificates*		
First Year	CADD	RAPP	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours - Online Only** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours - Night Only** **Total Semester Hours: 15**			 √ √
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** Technical Elective **3 Credit Hours**	 √ √		 √ √

Total Semester Hours: 15			
Second Year			
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** ETI 1420 - Properties Materials/Cutting Tools **3 Credit Hours - Online Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science General Education **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	√
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: CADD - Computer-Aided Design and Drafting (CCC) RAPP - Rapid Prototyping Specialist (CCC) ETSS - Engineering Technology Support Specialist (CCC)			

Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS)

Admission Program Objective Code ETDM
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a

combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007), Digital Manufacturing Specialist (CCC) (State CIP Code 0615000009), and Rapid Prototyping Specialist (CCC) (State CIP code 0615000012) certificates.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation,

sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe

operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) (ETDM)	Companion Certificates*		
First Year	ETTS	DMFS	RAPP
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**			

ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours** **Total Semester Hours: 15**	√	√ √	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√ √	√	
Second Year **Fall Semester** PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** ETI 1420 - Prop of Materials/Cutting Tools **3 Credit Hours - Online Only** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	√	√	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours**	√	√ √	√

Total Semester Hours: 15			
Total Program Hours: 60			
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC) DFMS - Digital Manufacturing Specialist (CCC) RAPP - Rapid Prototyping Specialist (CCC)			

Engineering Technology - Electronics Specialization Option (AS)

Admission Program Objective Code ETES
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the five specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, Digital Manufacturing and Electronics with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hours core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.
Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Required Courses

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

EET 1141C - Solid State Electronics

3 Credit Hours
(Fall, Spring)

This is the third course required for Electronics Aide certificate. This course introduces the student to the concept, components, and uses of solid state electronics. Topics include semiconductor devices; thyristors and diodes, transistors, amplifiers, power supplies, oscillators, and optoelectronics. The use of capacitors and inductors in solid state electronics will be also covered. The design, set-up, and troubleshooting solid state circuits and devices using various power supplies and function generators will be dispersed throughout the class.

Prerequisite(s): EET 1025C

EET 1180C - Industrial Electronic Troubleshooting

3 Credit Hours
(Fall, Spring)

This course covers troubleshooting procedures for a variety of electronic equipment and circuits common to industrial applications. The student will develop and implement trouble shooting protocols and plans, equipment monitoring plans, a preventive maintenance plan, and select appropriate test and monitoring equipment. Safety in an industrial setting will be stressed and reinforced through a series of lab exercises throughout the course.

Prerequisite(s): EET 1084C

EET 2155C - Linear Integrated Circuits

3 Credit Hours
(Fall, Spring)

This course covers the fundamentals and applications of linear integrated circuits and operational amplifiers. The course covers includes inverting and non-inverting amplifiers, comparators, signal generators, differential and instrumentation amplifiers, operational amplifier specifications, active filters, modulator-demodulator integrated circuits, timers, analog to digital converters (ADC), and digital to analog converters (DAC) and measurement and analysis of linear circuits and devices.

Prerequisite(s): EET 1015C, EET 1025C

Total Technical Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Electronics Specialization Option (AS) (ETES)	Companion Certificate*
First Year	ETSS
Fall Semester	
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**	
ETI 1710 - Occupational Safety **3 Credit Hours - Offered Online Only**	
SLS 2505 - Critical Thinking **3 Credit Hours**	√
ETD 1320C - AutoCAD I **3 Credit Hours**	√
EET 1084C - Introduction to Electronics **3 Credit Hours -Offered at Night Only**	
Total Semester Hours: 15	

Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** EET 1015C - Electricity/Electronics I, DC Circuits **3 Credit Hours - Offered at Night Only** ETD 2150 - Industrial Print Reading **3 Credit Hours** **Total Semester Hours: 15** **Second Year**	√ √
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** EET 1180C - Industrial Electronic Troubleshooting **3 Credit Hours** ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Online Only** EET 1025C - Electricity/Electronics II, AC Circuits **3 Credit Hours - Offered at Night Only** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** **Total Semester Hours: 15**	√
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** Social Science **3 Credit Hours** EET 1141C - Solid State Electronics **3 Credit Hours** EET 2155C - Linear Integrated Circuits **3 Credit Hours** **Total Semester Hours: 15**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC)	

Engineering Technology - Maintenance Technician Specialization Option (AS)

Admission Program Objective Code ENMT
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. Instruction in electrical/electronic principles, basic mechanic fundamentals, robotics and machine repair prepare the student to meet the demands and develop the skills required to maintain and troubleshoot high-tech manufacturing equipment. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality. Candidates interested in this program should be interested in working with their hands and enjoy the challenges of programming and troubleshooting electrical and mechanical equipment.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected core courses from this program of study may be eligible to receive the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007) certificate.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Required Courses

EEL 2603C - Robotics-Mechanics and Controls

3 Credit Hours
(Fall)

This course introduces the student to robotics. Instructional topics will include robot classifications, applications, Input/Output (I/O) and sensor interfacing.

Prerequisite(s): ETS 1542C

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

ETM 1315C - Hydraulics & Pneumatics Fundamentals

3 Credit Hours
(Spring)

This course introduces the student to basic hydraulic and pneumatic fundamentals. Instructional topics will include components, fluid pressure and flow and basic circuit design and application.

ETS 1542C - Introduction to Programmable Logic Controllers

3 Credit Hours
(Fall)

This is an introductory course in Programmable Logic Controllers (PLCs.) The student will learn basic concepts with a focus on programming and practical applications.

Prerequisite(s): EET 1084C

Total Technical Credits Required: 15

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Maintenance Technician Specialization Option (ENMT)	Companion Certificate*
First Year	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** EET 1084C - Introduction to Electronics **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ETD 2150 - Industrial Print Reading **3 Credit Hours** EET 1015C - Electricity/Electronics I, DC Circuits **3 Credit Hours** **Total Semester Hours: 15**	
Second Year	
Fall Semester PHY 1020 - Physical Science **3 Credit Hours ♦** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours**	

ETI 1420 - Properties of Materials and Processes **3 Credit Hours**	√
EET 1025C - Electricity/Electronics II, AC Circuits **3 Credit Hours**	√
ETS 1542C - Introduction to Programmable Logic Controllers **3 Credit Hours**	
Total Semester Hours: 15	
Spring Semester	
ETI 2110 - Total Quality Tools **3 Credit Hours**	
PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**	√
Social Science General Education **3 Credit Hours**	
EEL 2603C - Robotics-Mechanics and Controls **3 Credit Hours**	
ETM 1315C - Hydraulics & Pneumatics Fundamentals **3 Credit Hours**	
Total Semester Hours: 15	
Total Program Credits: 60	
* Courses with √ can also be used in the Companion Certificate indicated: ETSS - Engineering Technology Support Specialist (CCC)	

Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS)

Admission Program Objective Code ETMD
State CIP Code 1615000001

The purpose of this program is to prepare students for employment or provide additional training for persons previously or currently employed in the manufacturing, electronics, aerospace, or other related industries. This degree is a planned sequence of instruction consisting of the four specializations: Mechanical Design and Fabrication, Digital Design and Modeling, Advanced Technology, and Digital Manufacturing with one common core. It is recommended that students complete the core before advancing to the courses in the next level of specialization. The coverage includes communication skills, technical competency, safe and efficient work practices and a combination of theory and laboratory activities to gain the necessary cognitive and manipulative skills to support engineering design, processes, production, testing, and product quality.

The 18 credit hour core has been aligned with the Manufacturing Skills Standards Council's (MSSC) skills standards. The MSSC skill standards define the knowledge, skills, and performance needed for positions in manufacturing. After completing this core and the General Education requirements, the students will be eligible to take the exam for the MSSC Production Technician Certification.

Students who successfully complete selected courses from this program of study may be eligible to receive the CNC Machinist/Fabricator (CCC) (State CIP Code 0615080502), the Engineering Technology Support Specialist (CCC) (State CIP Code 0615000007).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to

meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

____ ____ Social Sciences **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2905 - Independent Study – Drafting

1 Credit Hour
(Fall, Spring, Summer)

Practical treatment of special geometry, graphics, and design with emphasis on individual work projects utilizing such graphical techniques as orthographic projection, perspective drawing, auxiliary views, topographic drawing, and graphing.

Prerequisite(s): EGN 1111C and ETD 1112 or permission of instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
* This course may be taken up to four times for credit.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

ETI 2419C - Advanced Concepts of CNC Machines and CNC Machining Practices

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with advanced concepts in CNC machines and CNC machining to include: theory, operation, setup, safety, and practices.

Prerequisite(s): PMT 2261C or PMT 2262C

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe

operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology - Mechanical Design and Fabrication Specialization Option (AS) (ETMD)	Companion Certificate*	
First Year	CNMM	ETSS
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		

ETI 1710 - Occupational Safety **3 Credit Hours**		
SLS 2505 - Critical Thinking **3 Credit Hours**		√
ETD 1320C - AutoCAD I **3 Credit Hours**	√	
EET 1084C - Introduction to Electronics **3 Credit Hours**		
Total Semester Hours: 15		
Spring Semester		
ETD 2150 - Industrial Print Reading **3 Credit Hours**		√
ENC 2210 - Technical Report Writing **3 Credit Hours**		√
ETM 1005C - Basic Mechanical Operations **3 Credit Hours**		
MAC 1105 - College Algebra **3 Credit Hours** ♦		
Technical Elective **3 Credit Hours**		
Total Semester Hours: 15		
Second Year		
Fall Semester		
ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Online Only**		√
ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours**		√
PHY 1020 - Physical Science **3 Credit Hours** ♦		
Technical Elective **3 Credit Hours**	√	
Technical Elective **3 Credit Hours**		
Total Semester Hours: 15		
Spring Semester		
PHI 2600 - Introduction to Ethics **3 Credit Hours** ❖ † ¶		√
ETI 2110 - Total Quality Tools **3 Credit Hours**		
Social Science General Education **3 Credit Hours**	√	
Technical Elective **3 Credit Hours**		
Technical Elective **3 Credit Hours**		

Total Semester Hours: 15		
Total Program Hours : 60		
* Courses with √ can also be used in the Companion Certificate indicated: CNMM - CNC Machinist/Fabricator (CCC) ETSS - Engineering Technology Support Specialist (CCC)		

College Credit Certificate

CNC Machinist/Fabricator (CCC)

Admission Program of Study Code CNMM
State CIP Code 0648051002

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations

are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

CNC Machinist/Fabricator (CCC) (CNMM)
First Year **Fall Semester** ETD 2364C - SolidWorks I **3 Credit Hours** PMT 1250C - Introduction to CNC Machining **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 6**
Spring Semester PMT 2261C - CNC Machining I **3 Credit Hours - Offered at Night Only** **Total Semester Hours: 3**
Second Year **Fall Semester** PMT 2262C - CNC Machining II **3 Credit Hours - Offered at Night Only**

Total Semester Hours: 3
Total Program Hours: 12

Computer-Aided Design and Drafting (CCC)

Admission Program of Study Code CADD
State CIP Code 0615130304

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Design & Modeling Specialization Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Computer-Aided Design and Drafting (CCC) (CADD)
Fall Semester ETD 1320C - AutoCAD I **3 Credit Hours** ETD 2357C - Inventor I **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester ETD 1340C - AutoCAD II **3 Credit Hours** ETD 2358C - Inventor II **3 Credit Hours** ETD 2368C - SolidWorks II **3 Credit Hours** **Total Semester Hours: 9**
Summer Semester ETD 2350C - AutoCAD III **3 Credit Hours** ETD 1355C - AutoCAD 3-D Modeling I **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 24

Digital Manufacturing Specialist (CCC)

Admission Program of Study Code DMFS
State CIP Code 0615000009

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) degree (State CIP Code 1615000001).

Core Courses

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid

prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

Total Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Digital Manufacturing Specialist (CCC) (DMFS)
Fall Semester ETD 2357C - Inventor I **3 Credit Hours** ETD 2364C - SolidWorks I **3 Credit Hours** PMT 1203C - Introduction to Machining **3 Credit Hours - Offered at Night Only** PMT 1250C - Introduction to CNC Machining **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester PMT 2261C - CNC Machining I **3 Credit Hours Offered at Night Only** ETD 2371C - 3D Printing I **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester PMT 2262C - CNC Machining II **3 Credit Hours Offered at Night Only** ETD 2372C - 3D Printing II **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 24

Engineering Technology Support Specialist (CCC)

Admission Program of Study Code ETSS
State CIP Code 0615000007

Students who successfully complete this certificate may be eligible to receive credits towards one of the Engineering Technology (AS) degree (State CIP Code 1615000001) specializations: Engineering Technology - Electronics Specialization Option (AS), Engineering Technology - Maintenance Technician Specialization Option (AS), Engineering Technology - Digital Design & Modeling Specialization Option (AS), Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) or Engineering Technology - Mechanical Design & Fabrication Specialization Option (AS) .

Core Courses

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Engineering Technology Support Specialist (CCC) (ETSS)
Fall Semester EET 1084C - Introduction to Electronics **3 Credit Hours - Offered at Night Only** ETI 1420 - Properties of Materials and Processes **3 Credit Hours - Offered Online Only** ETI 1710 - Occupational Safety **3 Credit Hours - Offered Online Only** **Total Semester Hours: 9**
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** ETD 1320C - AutoCAD I **3 Credit Hours** ETM 1010C - Mechanical Measurement and Instrumentation **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Rapid Prototyping Specialist (CCC)

Admission Program of Study Code RAPP
State CIP Code 0615000012

Students who successfully complete this certificate may be eligible to receive credits towards the Engineering Technology - Digital Manufacturing Specialization (DM) Option (AS) or the Engineering Technology - Digital Design & Modeling Specialization Option (AS) Option (Both State CIP Code 1615000001).

Core Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

Total Technical Elective Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Rapid Prototyping Specialist (CCC) (RAPP)
Fall Semester ETD 2364C - SolidWorks I **3 Credit Hours** ETD 2371C - 3D Printing I **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester ETD 2368C - SolidWorks II **3 Credit Hours** ETD 2372C - 3D Printing II **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 12

Graphics Technology

Associate in Science

Graphics Technology - Graphic Design Option (AS)

Admission Program Objective Code GRTH
State CIP Code 1611080300

The Graphics Technology (Graphic Design Technology) A.S. degree is intended for students interested in careers in Graphic Design and Commercial Art where creativity and visual communication are core competencies. Students are encouraged, but not required, to contact Graphic Arts faculty at 729-6019 for detailed advising to plan a program of study before enrolling in courses.

Students who successfully complete selected courses from this program of study may be eligible to receive the Graphic Design Production (CCC) (State CIP Code 0650040204), and/or Graphic Design Support (CCC) (State CIP Code 0650040202).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 24

Technical Elective Courses

Select 22 credits from the following:

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial

relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

GRA 2905 - Independent Study – Graphic Design

1 Credit Hour
(Offered as needed)

The student will initiate independent computer related work, utilizing various software and hardware. The course may be taken four times for credit.

Prerequisite(s): GRA 1151C or PGY 1801C

▲Technology-Across-the-Curriculum Course.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 2221C - Commercial Photography II

4 Credit Hours
(Offered as needed)

As advanced a course that allows the student to expand their skill set in producing photographic illustrations for industrial and advertising use. Students may explore product, portrait, and on-location commercial photographic projects.

Prerequisite(s): PGY 1220C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2804C - Digital Photography III

4 Credit Hours
(Offered as needed)

An advanced-level photography courses where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 2802C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits (GRA, PGY) _

Total Technical Elective Credits Required: 22

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Graphics Technology, Graphics Design Option (AS) (GRTH)	Companion Certificate*	
First Year	GRDS	GRAT
Fall Semester		
PGY 1801C - Digital Photography I **4 Credit Hours**		√
GRA 1151C - Illustration I **3 Credit Hours**	√	√
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**		
Mathematics General Education **3 Credit Hours**		
Additional General Education **2 Credit Hours**		

Total Semester Hours: 15		
Spring Semester ART 2602C - Digital Imaging I **4 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** Humanities General Education **3 Credit Hours** Science General Education **4 Credit Hours** **Total Semester Hours: 14**	√ √	√ √
Summer Semester Social Science General Education **3 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** **Total Program Hours: 7**		√
Second Year		
Fall Semester GRA 1152C - Illustration II **3 Credit Hours** GRA 2191C - Graphic Design II **3 Credit Hours** ART 2603C - Digital Imaging II **4 Credit Hours** PGY 1220C - Commercial Photography I **4 Credit Hours** GRA 2900 - Independent Study – Graphic Art **1 Credit Hour** **Total Semester Hours: 15**	√	√ √
Spring Semester PGY 2221C - Commercial Photography II **4 Credit Hours** GRA 2950C - Advanced Graphic Projects **4 Credit Hours** PGY 2804C - Digital Photography III **4 Credit Hours** GRA 2905 - Independent Study – Graphic Design **1 Credit Hour** **Total Semester Hours: 13**		

Total Program Hours: 64		
* Courses with √ can also be used in the Companion Certificate indicated: Graphic Design Support (CCC) GRAT - Graphics Design Production (CCC)		

Graphics Technology - Visual Artist Option (AS)

Admission Program Objective Code GRTV
State CIP Code 1611080300

The Graphics Technology (Graphic Design Technology) A.S. degree is intended for students interested in careers in Graphic Design and Commercial Art where creativity and visual communication are core competencies. Students are encouraged but not required to contact Graphic Arts faculty for detailed advising before enrolling in courses to plan a program of study at 729-6019.

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2500C - Painting I

3 Credit Hours
(Fall, Spring)

Course will include design elements, composition and spatial relationships. Emphasis is on color theory, color mixing, and execution thereof within a variety of subject matter. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 26

Technical Elective Courses

Select 20 credits from the following:

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2701C - Sculpture I

3 Credit Hours
(Spring)

An introductory course in the technical and aesthetic consideration of sculptural forms. Includes a wide range of materials and expressions, representing past and present sculptural methods. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2703C - Sculpture II

3 Credit Hours
(Spring)

Allows continued experience in more complex three-dimensional techniques; emphasis on individual projects and conceptual approach.

Prerequisite(s): ART 2701C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2501C - Painting II

3 Credit Hours
(Fall, Spring)

This course is a continuation of Painting I ART 2500C with emphasis on further exploration of student’s personal style and original techniques. Further experimentation in abstraction and emotional aspects of form and color are explored

and expressed.

Prerequisite(s): ART 2500C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2955 - Portfolio Development

3 Credit Hours
(Spring)

Development of a working portfolio through studio project aimed at fulfilling the general requirements the average company, university, art school or advertising agency looks for in a portfolio presentation.

Prerequisite(s): ART 1201C, ART 1203C, ART 1300C, ART 1301C.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

- ____ ____ Other Approved College Credits _

Total Technical Elective Credits Required: 20

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Graphics Technology, Visual Artist Option (AS) (GRTV)
First Year
Fall Semester ART 1300C - Drawing I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **3 Credit Hours**

Additional General Education **2 Credit Hours**

Total Semester Hours: 15

Spring Semester

GRA 1151C - Illustration I **3 Credit Hours**

ART 1201C - Two-Dimensional Design **3 Credit Hours**

Humanities General Educaiton **3 Credit Hours**

Science General Education **4 Credit Hours**

Total Semester Hours: 13

Summer Semester

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism **3 Credit Hours ❖ † ¶**

PGY 1801C - Digital Photography I **4 Credit Hours**

Total Semester Hours: 7

Second Year

Fall Semester

GRA 2190C - Graphic Design I **3 Credit Hours**

GRA 1152C - Illustration II **3 Credit Hours**

ARH 2402 - Art History: Modern Art **3 Credit Hours ❖ † ¶**

ART 2500C - Painting I **3 Credit Hours**

ART 1301C - Drawing II **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

ART 2501C - Painting II **3 Credit Hours**

ART 1203C - Three-Dimensional Design **3 Credit Hours**

Social Science General Education **3 Credit Hours**

PGY 1220C - Commercial Photography I **4 Credit Hours**

GRA 2905 - Independent Study – Graphic Design **1 Credit Hour**

Total Semester Hours: 14
Total Program Hours: 64

College Credit Certificate

Graphic Design Production (CCC)

Admission Program of Study Code GRDP
State CIP Code 0611080303

Students who successfully complete this certificate may be eligible to receive credits towards the Graphics Technology (Graphic Design) A.S. Degree (State CIP Code 1611080300).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 25

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Graphic Design Production (CCC) (GRAT)
Fall Semester PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** ART 2602C - Digital Imaging I **4 Credit Hours** **Total Semester Hours: 14**
Spring Semester ART 2603C - Digital Imaging II **4 Credit Hours** PGY 2802C - Digital Photography II **4 Credit Hours** GRA 1152C - Illustration II **3 Credit Hours** **Total Semester Hours: 11**
Total Program Hours: 25

Graphic Design Support (CCC)

Admission Program of Study Code GRDS
State CIP Code 0611080302

Students who successfully complete this certificate may be eligible to receive credits towards the Graphics Technology (Graphic Design) A.S. Degree (State CIP Code 1611080300).

Core Courses

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 14

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Graphic Design Support (CCC) (GRDS)
Fall Semester ART 2602C - Digital Imaging I **4 Credit Hours** GRA 2190C - Graphic Design I **3 Credit Hours** **Total Semester Hours: 7**
Spring Semester

PGY 1801C - Digital Photography I **4 Credit Hours** GRA 1151C - Illustration I **3 Credit Hours** **Total Semester Hours: 7**
Total Program Hours: 14

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

Health Services Management

Associate in Science

Health Services Management (AS)

Admission Program Objective Code HTMG
State CIP Code 1351070101

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **2 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

HSA 1100 - Introduction to Health Care

3 Credit Hours
(Fall)

This course provides an overview of the United States Healthcare System, including the economic, social, political, and technological forces that shape the industry. The role of state and federal government and regulatory agencies in healthcare delivery is examined. The fundamental roles and responsibilities of healthcare team members are surveyed. Healthcare safety, security, and infection control procedures will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage

and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

or

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of

interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1346 - Supervision II

3 Credit Hours
(Offered as needed)

The course presents a continuing study of the functions of a personnel manager, philosophy of general management, employee socioeconomic climate and other information. Included are orientation, training, labor unions, safety, health and other related topics.

Prerequisite(s): MNA 1345 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Note(s):

***** *Anatomy & Physiology I with Anatomy & Physiology II may be substituted for BSC 2020C.*

*** Students who have successfully completed a health related program such as dental assisting, practical nursing, or surgical technology may challenge the Medical Terminology course. Contact the Division Director for further information.*

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Health Services Management (AS) (HTMG)
First Year
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** HSA 1100 - Introduction to Health Care **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Mathematics General Education **- 3 Credit Hours**

BSC 2020C - Human Structure and Function **4 Credit Hours** or BSC 1085C - Anatomy and Physiology I and BSC 1086C - Anatomy and Physiology II

Total Semester Hours: 16

Spring Semester

HSC 1100 - Health Education **3 Credit Hours**

HSC 1400 - First Aid **3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

HSC 1531 - Medical Terminology **3 Credit Hours**

MNA 1161 - Customer Service **3 Credit Hours**

Social Science General Education **- 3 Credit Hours**

Humanities General Education Course **- 3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Total Semester Hours: 15

Spring Semester

MNA 1345 - Supervision I **3 Credit Hours**

OST 2335 - Business Communications **3 Credit Hours** or SPC 2300 - Interpersonal Communication

ENC 2210 - Technical Report Writing **3 Credit Hours**

Technical Elective **- 3 Credit Hours**

Additional General Education Credits - **2 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 60

Hospitality and Tourism

Associate in Science

Culinary Management (AS)

Culinary Management

Admission Program of Study code: CUL

State CIP Code 1252090101

The Emerald Coast is one of the top tourist beach destinations in the U.S. and tourism is one of the leading industries in Northwest Florida. Northwest Florida State College's Culinary A.S. Degree Program is designed to support the tourism industry by preparing students for employment in the culinary and restaurant industry. Students will gain employability skills and knowledge through classroom instruction and culinary lab experience in the following courses Sanitation and Safety; Maintenance and Operation of Equipment; Methods of Preparation an d Cooking; Perform Different Types of Food Services; Nutrition; Baking; and Dining Room and Beverage Management. Students will also receive training in communications, leadership and human relations skills. This program focuses on broad, transferable skills and stresses understanding and demonstration of elements of the culinary industry. Careers include culinary manager, food and beverage manager, pantry cook, executive chef and many more.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in :

Chef's Apprentice (CCC)
Culinary Arts (CCC)

Culinary Arts Management Operations (CCC)

General Education

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**
- MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**
- BSC 1005 - General Biology **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦** or CHM 1020 - Chemical Science **3 Credit Hours ♦**
- ECO 2013 - Economics I **3 Credit Hours ♦**
- HUN 2201 - Nutrition **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup.

Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Culinary Management (AS)
First Year
Fall Semester FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** SLS 1101 - College Success **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester FSS 1202L - Food Production I **3 Credit Hours** FSS 2100 - Food Plans and Menu Preparation **3 Credit Hours** BSC 1005 - General Biology or PHY 1020 - Physical Science or CHM 1020 - Chemical Science **3 Credit Hours ♦** MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦** **Total Semester Hours: 12**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** FSS 1246L - Baking and Pastries I **3 Credit Hours** FSS 1120 - Food and Beverage Purchasing **3 Credit Hours** **Total Semester Hours: 9**
Second Year
Fall Semester FSS 1001 - Culinary Techniques **3 Credit Hours**

FSS 1221L - Food Production II **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** HUN 2201 - Nutrition **3 Credit Hours** FSS 2240L - Classical Cuisine **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester FSS 2942 - Culinary Internship **3 Credit Hours** FSS 2242L - International and Regional Cuisine **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** **Total Semester Hours: 12**
Total Program Hours: 60

Hospitality and Tourism (AS)

Hospitality and Tourism

Admission Program of Study Code HSTR

State CIP Code 1252090101

The Hospitality and Tourism program prepares students for employment in management positions in the hospitality industry and/or provides supplemental training for persons previously or currently employed in these occupations. The hospitality industry as addressed in this program includes the hotel, motel, bed and breakfast, resort, club, marina, and other lodging organizations.

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in :

Event Planning Management (CCC)

Food and Beverage Management (CCC)

Food and Beverage Operations (CCC)

Food and Beverage Specialist (CCC)

Guest Services Specialist (CCC)

Rooms Division Management (CCC)

Rooms Division Operations (CCC)

Rooms Division Specialist (CCC)

General Education

- ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**
- PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶**
- MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦**
- BSC 1005 - General Biology **3 Credit Hours ♦** or CHM 1020 - Chemical Science **3 Credit Hours ♦** or PHY 1020 - Physical Science **3 Credit Hours ♦**
- ECO 2013 - Economics I **3 Credit Hours ♦**
- HUN 2201 - Nutrition **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

Total Core Credits Required: 42

Total Program Credits Required: 60

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Hospitality and Tourism (AS) – Specializations – Event Planning, Food and Beverage, and Room Division
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** SLS 1101 - College Success **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** FSS 1250 - Dining Room Management **3 Credit Hours** BSC 1005 - General Biology, PHY 1020 - Physical Science, or CHM 1020 - Chemical Science **3 Credit Hours ♦**

MAC 1105 - College Algebra **3 Credit Hours ♦** or STA 2023 - Statistics **3 Credit Hours ♦** **Total Semester Hours: 12**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** HFT 1410 - Front Office Management **3 Credit Hours** CGS 1570 - Computer Applications for Business **3 Credit Hours** **Total Semester Hours: 9**
Second Year
Fall Semester HFT 1300 - Managing Housekeeping **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** ECO 2013 - Economics I **3 Credit Hours ♦** HUN 2201 - Nutrition **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HFT 2210 - Hospitality Management **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** HFT 2942 - Hospitality Internship **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 60

College Credit Certificate

Chef's Apprentice (CCC)

Admission Program of Study Code: CHEF

State CIP Code 0612050302

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Culinary Arts (CCC)

Admission Program of Study Code: CULA

State CIP Code 0612050301

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 36

Culinary Arts Management Operations (CCC)

Admission Program of Study Code: CULM

State CIP Code 0612050401

Students who successfully complete this certificate may be eligible to receive credits towards the Culinary Management (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 2240L - Classical Cuisine

3 Credit Hours
(Fall)

Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 18

Event Planning Management (CCC)

Admission Program of Study Code (EPMG)

State CIP Code 0252090905

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.

The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other

departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Event Planning Management (CCC) (EPMG)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** HFT 2210 - Hospitality Management **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester

FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Total Semester Hours: 24

Food and Beverage Management (CCC)

Admission Program of Study Code FBMG
State CIP Code 0252090503

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and

hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beveragement Management (CCC) (FBMG)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FSS 2500 - Food and Beverage Cost Control **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester

FSS 1250 - Dining Room Management **3 Credit Hours** HFT 2210 - Hospitality Management **3 Credit Hours** FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** FSS 1120 - Food and Beverage Purchasing **3 Credit Hours** **Total Semester Hours: 12**
Summer Semester HFT 2942 - Hospitality Internship **3 Credit Hours** FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 6**
Total Semester Hours: 30

Food and Beverage Operations (CCC)

Admission Program of Study Code FBOP
State CIP Code 0252090508

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101)

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beverage Operations (CCC) (FBOP)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** **Total Semester Hours: 6**
Spring Semester FSS 1250 - Dining Room Management **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Second Year
Spring Semester
FSS 2500 - Food and Beverage Cost Control **3 Credit Hours**
FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours**
Total Semester Hours: 6
Total Semester Hours: 18

Food and Beverage Specialist (CCC)

Admission Program of Study Code FBSP
State CIP Code 0252090507

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101)

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 12

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Food and Beverage Specialist (CCC) (FBSP)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 3**
Second Year
Spring Semester
FSS 2500 - Food and Beverage Cost Control **3 Credit Hours**
Total Semester Hours: 3
Total Semester Hours: 12

Guest Services Specialist (CCC)

Admission Program of Study Code GUES
State CIP Code 0252090403

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 15

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Guest Services Specialist (CCC) (GUES)	Companion Certificate*
First Year	
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 3**	
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 3**	
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** **Total Semester Hours: 3**	√
Total Program Credits: 15	
* Courses with √ can also be used in the Companion Certificate indicated: Rooms Division Operations (CCC)	

Rooms Division Management (CCC)

Admission Program of Study Code RMMG
State CIP Code 0252090402

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems

approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Rooms Division Management (CCC) (RMMG)	Companion Certificate*
First Year	
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours** FOS 2201 - Food Service Sanitation Management **3 Credit Hours** HFT 2223 - Human Relations and Supervisory Development **3 Credit Hours** **Total Semester Hours: 15**	
Spring Semester FSS 2284 - Catering, Banquet and Event Management **3 Credit Hours** HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 6**	
Second Year	
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** HFT 2942 - Hospitality Internship **3 Credit Hours** FSS 2251 - Food and Beverage Management **3 Credit Hours** **Total Semester Hours: 9**	√
Total Program Credits: 30	
* Courses with √ can also be used in the Companion Certificate indicated: Rooms Division Operations (CCC)	

Rooms Division Operations (CCC)

Admission Program of Study Code RMOP
State CIP Code 0252090406

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

Total Program Credits Required: 19

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Rooms Division Operations (CCC) ()
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours**

Total Semester Hours: 6
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** HFT 1410 - Front Office Management **3 Credit Hours** **Total Semester Hours: 6**
Summer Semester HFT 2940 - Hospitality Internship **1 Credit Hour** **Total Semester Hours: 1**
Second Year
Fall Semester
HFT 1500 - Marketing and Sales in the Hospitality Industry **3 Credit Hours**
HFT 2942 - Hospitality Internship **3 Credit Hours**
Total Semester Hours: 6
Total Semester Hours: 19

Rooms Division Specialist (CCC)

Admission Program of Study Code ROOM
State CIP Code 0252090405

Students who successfully complete this certificate may be eligible to receive credits towards the Hospitality and Tourism (AS) degree (State CIP Code 1252090101).

Core Courses

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Program Credits Required: 13

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester

Rooms Division Specialist (CCC) (ROOM)
First Year
Fall Semester HFT 1000 - Introduction to Hospitality Management **3 Credit Hours** HFT 1300 - Managing Housekeeping **3 Credit Hours** **Total Semester Hours: 6**
Spring Semester HFT 1250 - Hotel and Resort Operations **3 Credit Hours** **Total Semester Hours: 3**
Summer Semester HFT 1410 - Front Office Management **3 Credit Hours** HFT 2940 - Hospitality Internship **1 Credit Hour** **Total Semester Hours: 4**
Total Semester Hours: 13

Industrial Management Technology

Associate in Science

Industrial Management Technology (AS)

Admission Program Objective Code INDU
State CIP Code 1652020501

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**

- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

Required Course

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

GEB 1214 - Business and Supervision Terminology

2 Credit Hours
(Fall)

This course is designed for students to achieve mastery of the special vocabulary, jargon, and concept terminology associated with general business and supervision in the modern workplace. Students will apply the terms in common workplace scenarios and hypothetical situations, as well as in standard written documents and assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 29

Technical Elective Courses

Select 13 credits from the following:

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various

areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2947 - Academic Learning Field Studies I

1 Credit Hour
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2948 - Academic Learning Field Studies II

2 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in

a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2949 - Academic Learning Field Studies III

3 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

Total Technical Elective Credits Required: 13

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Industrial Management Technology (AS) (INDU)
First Year
Fall Semester GEB 1214 - Business and Supervision Terminology **2 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours** MTB 1103 - Business Mathematics **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **1 Credit Hours** **Total Semester Hours: 15**
Spring Semester ETI 1710 - Occupational Safety **3 Credit Hours** MNA 1345 - Supervision I **3 Credit Hours** Social Science General Education Course **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours** Humanities General Education Course **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester Science General Education Course **3 Credit Hours** ACG 2001 - Accounting I **3 Credit Hours** MAN 2021 - Management **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester ETI 2110 - Total Quality Tools **3 Credit Hours** MAN 2300 - Personnel Management **3 Credit Hours** MNA 2100 - Organizational Behavior **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Medical Coder/Biller

College Credit Certificate

Medical Coder/Biller (CCC)

Admission Program of Study Code MEDB
State CIP Code 0351070714

Core Courses

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

with

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

OR

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1432 - Pathopharmacology

3 Credit Hours
(Fall)

Introduction to the nature, cause, and treatment of disease entities and the body's defense mechanisms. Commonly used drugs will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2253 - CPT Coding - Part 1

3 Credit Hours
(Spring)

Instruction and practice in basic CPT coding conventions, principles of classifying physician services using current procedural terminology (CPT-4), APC, and auditing procedures. Ethical standards of practice will be analyzed.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

(Previously listed as HIM1253)

HIM 2272 - Healthcare Reimbursement

3 Credit Hours
(Summer)

Emphasis on billing regulations for the State of Florida. Course content includes LMRPS, Workers' Compensation laws, Florida Medicare, and claims for automobile accident injuries.

Prerequisite(s): HIM 2253 and HIM 2724 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2291 - CPT Coding Part 2

3 Credit Hours
(Spring)

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, inpatient and outpatient prospective payment systems, encoding software and RBRVs.

Prerequisite(s): HIM 2253 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2724 - ICD Coding Part 1

3 Credit Hours
(Fall)

This course provides a foundation using ICD-10-CM/PCS coding conventions, rules, methodology and sequencing, data sets, documentation requirements, and coding resources.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

HIM 2729 - ICD Coding Part 2

3 Credit Hours
(Fall)

This course focuses on assigning appropriate ICD, DRG, and Level II (HCPCS) codes to a wide range of original source medical documents. This course increases the quality of code selection by applying the decision process in problem solving using well-defined medical record review methods and guidelines. Ethical practices will be discussed.

Prerequisite(s): HIM 2724 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2815C - Professional Practice Experience

3 Credit Hours
(Summer)

Working in a simulated, online environment, students will endeavor to code and bill using nationally recognized, American Health Information Management Association (AHIMA) simulation software.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

Total Core Credits Required: 37

Total Program Credits Required: 37

Notes:

- Students must earn a grade of "C" or higher in each course in the curriculum in order to progress through the curriculum.
- Students must have a High School Diploma or GED to graduate from this program.

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Medical Coder/Biller (CCC) (MEDB)
Fall Semester BSC 2020C - Human Structure and Function **4 Credit Hours** HSC 1531 - Medical Terminology **3 Credit Hours** HIM 1432 - Pathopharmacology **3 Credit Hours**

HIM 2724 - ICD Coding Part 1 **3 Credit Hours** (Session 2) HIM 2729 - ICD Coding Part 2 **3 Credit Hours** (Session 3) **Total Semester Hours: 16**
Spring Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** HIM 1000 - Health Information and Delivery Systems **3 Credit Hours** HIM 1012 - Health Care and Legal Compliance **3 Credit Hours** HIM 2253 - CPT Coding - Part 1 **3 Credit Hours** (Session 2) HIM 2291 - CPT Coding Part 2 **3 Credit Hours** (Session 3) **Total Semester Hours: 15**
Summer Semester HIM 2815C - Professional Practice Experience **3 Credit Hours** HIM 2272 - Healthcare Reimbursement **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 37

Music Production Technology

Associate in Science

Music Production Technology (AS)

Admission Program Objective Code MUSC
State CIP Code 1650091300

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Audio Technology (Recording Arts) (CCC) (State CIP Code 0650060209).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**

- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

MUM 1620 - Audio and Acoustic Fundamentals

3 Credit Hours
(Fall, Spring, Summer)

Audio and Acoustic Fundamentals explores the basics of audio systems and equipment and the acoustical environment in which they are used. Emphasis is placed on equipment terminology, function and acoustical listening. The two basic fundamentals are summed together to begin laying the basic foundation required to operate audio and recording equipment.

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

Total Core Credits Required: 15

Technical Elective Courses

Select 31 credits from the following:

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7^{th} chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17^{th} & 18^{th} centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

- ____ ____ Other Approved College Credits (MUL, MUM, MUN, MUS, MUT, MVB, MVK, MVP, MVS, MVV, MVW)
- ____ ____ Other Approved College Credits

Total Technical Elective Credits Required: 31

Total Program Credits Required: 64

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Music Production Technology (AS) (MUSC)	Companion Certificate*
First Year	ATRA
Summer Semester MUT 1001 - Fundamentals of Music **3 Credit Hours** **Total Semester Hours: 3**	 √
Fall Semester MUM 1620 - Audio and Acoustic Fundamentals **3 Credit Hours** MUT 1121 - Music Theory I - Ear Training and Sight Singing **3 Credit Hours** MVV 1211 - Applied Music – Voice I **1 Credit Hour** MUL 1010 - Music Appreciation **3 Credit Hours † ♦ ¶** MUN 1360 - Madrigal Singers I **1 Credit Hour** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** **Total Semester Hours: 14**	 √ √ √ √ √
Spring Semester MUM 2600 - Recording Techniques I **3 Credit Hours** MUT 1122 - Music Theory II - Ear Training and Sight Singing **3 Credit Hours** MVV 2221 - Applied Music – Voice II **1 Credit Hour** MUN 2361 - Madrigal Singers II **1 Credit Hour** MVS 1016 - Applied Strings – Guitar I **1 Credit Hour** General Education Mathematics Course **3 Credit Hours** General Education Social Science Course **3 Credit Hours** **Total Semester Hours: 15**	 √ √ √ √
Second Year	

Summer Semester MUM 2300 - Introduction to the Music Industry **3 Credit Hours** **Total Semester Hours: 3**	 √
Fall Semester MUM 2601 - Recording Techniques II **3 Credit Hours** MUT 2126 - Music Theory III – Ear Training and Sight Singing **3 Credit Hours** MVS 1016 - Applied Strings – Guitar I **1 Credit Hour** MUN 1710A - Rock and Jazz Ensembles I **1 Credit Hour** MUS 2930 - Music – Special Topics **3 Credit Hours** General Education Science Course **4 Credit Hours** **Total Semester Hours: 15**	 √ √ √ √ √
Spring Semester MUM 2604 - Multi-Track Mixdown (Post Production) **3 Credit Hours** MUT 2127 - Music Theory IV – Ear Training and Sight Singing **3 Credit Hours** MVS 2026 - Applied Strings – Guitar II **1 Credit Hour** General Education Humanities Course **3 Credit Hours** Additional General Education Credits **2 Credit Hours** MUN 1720A - Rock and Jazz Ensembles II **1 Credit Hour** MUN 2361 - Madrigal Singers II **1 Credit Hour** **Total Semester Hours: 14**	 √ √ √ √ √
Total Program Hours: 64	
* Courses with √ can also be used in the Companion Certificate indicated: ATRA - Audio Technology (Recording Arts) (CCC)	

College Credit Certificate

Audio Technology (Recording Arts) (CCC)

Admission Program of Study Code ATRA
State CIP Code 0650060209

Students who successfully complete this program may apply these credits to the Music Production Technology (AS) degree (State CIP Code 1650091300).

Core Courses

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

- ____ ____ Other Approved College Credits (MUL, MUM, MUN, MUS, MUT, MVB, MVK, MVP, MVS, MVV, MVW) **3 Credit Hours**

Total Program Credits Required: 15

Natural Gas Operations and Distribution

Vocational Certificate

Natural Gas Operations and Distribution (PSAV)

Admission Program of Study Code GAS

State CIP Code 0647000002

Basic Skills Requirements: The student must be exempt or attain a **9th grade level** on each section of the TABE exam: Math, Language and Reading.

Core Courses

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

TRA 0080 - Tractor Trailer Truck Driver

320 Clock Hours
(Spring)

This course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety, accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip

preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

TRA 0086 - Tractor Operator

150 Clock Hours
(Fall)

This course is designed to build on the skills and knowledge students learned in the Heavy Equipment Maintenance Technician course for entry into the Heavy Equipment Operations industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study pneumatic and crawler-type tractor operations.

TRA 0650 - Natural Gas Distribution I

75 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance.

TRA 0651 - Natural Gas Distribution II

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Prerequisite(s): TRA 0650

TRA 0652 - Natural Gas Distribution III

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Total Program Hours Required: 1220

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Natural Gas Operations (PSAV)
Fall Semester

TRA 0650 - Natural Gas Distribution I **75 Clock Hours** TRA 0651 - Natural Gas Distribution II **150 Clock Hours** TRA 0652 - Natural Gas Distribution III **150 Clock Hours** TRA 0086 - Tractor Operator **150 Clock Hours** **Total Semester Clock Hours: 600**
Spring Semester TRA 0080 - Tractor Trailer Truck Driver **320 Clock Hours** PMT 0106C - Welder Helper **150 Clock Hours** PMT 0111C - Metal Preparation **150 Clock Hours** **Total Semester Clock Hours: 620**
Total Program Clock Hours: 1220

Network Systems Technology

Associate in Science

Network Systems Technology (AS)

Admission Program Objective Code NSTC
State CIP Code 1511100112

Students may apply selected credits from this program to the requirements of the following college credit certificates: Digital Forensics (CCC) (State CIP Code 0511100119), Network Security (CCC) (State CIP Code 0511100118), Network Server Administration (CCC) (State CIP Code 0511100112), and/or LINUX System Administrator (CCC) (State CIP Code 0511100122).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 1675C - Introduction to IP Telephony

3 Credit Hours
(Fall)

This course explains how companies are using IP Telephony equipment and software to efficiently upgrade existing telephone systems. In addition, the course will give the student a fundamental understanding of the architecture of voice communication and how signaling, call quality and public switched telephone networks operate in a LAN/WAN networking environment. The use of IP Telephony products will be discussed and how software allows companies to cost-effectively upgrade and eventually replace existing (legacy) telephone systems with more cost-effective and easy-to-use telephone equipment.

Prerequisite(s): CET 1600C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2682C - Cisco Voice over IP (VoIP)

3 Credit Hours
(Spring)

Instruction includes, but is not limited to, Voice over Internet Protocol (VoIP) theory, Voice Gateway configuration in a IP Telephony (IPT) solution, IP Phone configuration, design of VoIP networks and troubleshooting IPT networks. Students will design and configure various VoIP networks using case studies and laboratory equipment.

Prerequisite(s): CET 1675C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Systems Technology (AS) (NSTC)
First Year
Fall Semester CET 2660 - Network Security **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

General Education Humanities **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

CET 1610C - Routing Protocols and Concepts **3 Credit Hours**

Science General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Second Year

Fall Semester

CET 1675C - Introduction to IP Telephony **3 Credit Hours**

CET 1854C - Introduction to Wireless Technology **3 Credit Hours**

Social Science Education Course **3 Credit Hours**

Mathematics General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

CET 2682C - Cisco Voice over IP (VoIP) **3 Credit Hours**

Additional General Education Course **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Technical Elective **3 Credit Hours**

Total Semester Hours: 15

Total Program Hours: 60

* Courses with √ can also be used in the Companion Certificate indicated:
* DGFO - Digital Forensics (CCC) *

* NESC - Network Security (CCC)
* NNSA - Network Server Admin. (CCC) *
* NUNX - Linux System Administrator (CCC)

College Credit Certificate

Digital Forensics (CCC)

Admission Program of Study Code DGFO
State CIP Code 0511100119

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology (AS) degree (State CIP Code 1511100112).

Core Courses

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical

concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Technical Elective Courses

Select 8 credits from the following:

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 8

Total Program Credits Required: 32

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Digital Forensics (CCC) (DGFO)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2314C - Network Defense and Countermeasures **3 Credit Hours** CET 2880C - Digital Forensics Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** **Total Semester Hours: 12** **Summer Semester** CET 2881C - Digital Forensics II **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **2 Credit Hours** **Total Semester Hours: 8**

Total Program Hours: 32

LINUX System Administrator (CCC)

Admission Program of Study Code LINU
State CIP Code 0511100122

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology A.S. degree (State CIP Code 1511100112).

Technical Requirements

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise

Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2321 - UNIX Administration

3 Credit Hours
(Offered as needed)

This course is designed for network administrators in a UNIX operating environment. UNIX operating system concepts, architecture and administration will be explored using Linux. Includes shell programming, database managements, rapid application development, and programming tools such as PERL and C++.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CTS 1106

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Linux System Administrator (CCC) (LINU)
Fall Semester CET 1600C - Networking Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** CTS 1156C - Desktop Support **3 Credit Hours** **Total Semester Hours: 12**
Spring Semester CET 2615C - LAN Switching and Wireless **3 Credit Hours** CET 2854C - Fundamentals of Wireless LANs **3 Credit Hours** CTS 1106 - Fundamentals of UNIX **3 Credit Hours**

CTS 2321 - UNIX Administration **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 24

Network Security (CCC)

Admission Program of Study Code NESC
State CIP Code 0511100118

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology (AS) degree (State CIP Code 1511100112).

Core Courses

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming. Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 24

Technical Elective Courses

Select 6 credits from the following:

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

- COP 2XXX Any 2000 level COP prefix course **3 Credit Hours**

Total Technical Elective Credits Required: 6

Total Program Credits Required: 30

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Security (CCC) (NESC)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CET 1600C - Networking Fundamentals **3 Credit Hours** CET 1610C - Routing Protocols and Concepts **3 Credit Hours** COP 1000 - Introduction to Programming Concepts and Logic **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester

CET 2892C - Advanced Network Security **3 Credit Hours** CAP 2134C - Database Security **3 Credit Hours** CET 2685C - Fundamentals of Network Security **3 Credit Hours** **Total Semester Hours: 9**   **Summer Semester** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 6**
Total Program Hours: 30

Network Server Administration (CCC)

Admission Program of Study Code NNSA
State CIP Code 0511100112

Students who successfully complete this certificate may be eligible to receive credits towards the Network Systems Technology A.S. degree (State CIP Code 1511100112).

Core Courses

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data

communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2302C - Windows Active Directory

3 Credit Hours
(Spring)

This course focuses on a Windows server directory service environment, including forest and domain structure, DNS, site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user/group/computer account strategies. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2390C - Installing and Configuring Windows Server 2016

3 Credit Hours
(Spring)

This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skill set and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking services, and initial Hyper-V configuration and is also preparation material for, Exam 70-410: Installing and Configuring Windows Server 2016.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Program Credits Required: 15

Technical Requirement Courses

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2391C - Administering Windows Server 2016

3 Credit Hours
(Spring)

This course is the second in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skills and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server 2016 infrastructure, such as user and group management, network access and data security and is also preparation material for, Exam 70-411: Administering Windows Server 2016.

Prerequisite(s): CTS 2390C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2392C - Configuring Advanced Windows Server 2016

3 Credit Hours
(Summer)

This course is the third in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 Infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2016 infrastructure, such as identity management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance and rights management. This course is also preparation material, and maps directly to, Exam 70-412: Configuring Advanced Windows Server 2016 Services.

Prerequisite(s): CTS 2391C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Requirement Credits Required: 9

Total Program Credits Required: 24

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Network Server Administration (CCC) (NNSA)
Fall Semester CET 2660 - Network Security **3 Credit Hours** CTS 2390C - Installing and Configuring Windows Server 2016 **3 Credit Hours** CTS 1134 - Network Foundations **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester CET 2182C - PC Hardware A+ **3 Credit Hours** CTS 2163C - Windows 10 Client Operating System **3 Credit Hours** CTS 2302C - Windows Active Directory **3 Credit Hours** CTS 2391C - Administering Windows Server 2016 **3 Credit Hours** **Total Semester Hours: 12** **Summer Semester** CTS 2392C - Configuring Advanced Windows Server 2016 **3 Credit Hours** **Total Semester Hours: 3**
Total Program Hours: 24

Nursing

Associate in Science

Nursing (AS)

Admission Program Objective Code NURS
State CIP Code 1351380100

This program is a Selective Admission program subject to additional program policies and licensure requirements stipulated in the "Nursing Program Student Handbook." Policies are strictly enforced and students should work with the Nursing Program staff rather than self-advise. The admission criteria and process are subject to change; students should contact the Associate Degree Nursing Program office for the most current information.

General Education

Unless otherwise noted, select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Any core Mathematics course **3 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

or PSY 2012 - Psychology **3 Credit Hours ♦**

Total General Education Credits Required: 20

Core Courses

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

NUR 1021C - Nursing Process I

6 Credit Hours
(Fall, Spring)

This course introduces concepts and principles of holistic nursing care. Students will build on knowledge obtained in the biophysical and psycho-social sciences in this first of four required clinical nursing courses in the nursing curriculum. Theory content includes an introduction to healthcare systems ethical-legal aspects of nursing practice, health and illness, communications, functional health patterns of clients, stress-adaptation, professional behaviors, and all steps of the nursing process with emphasis on assessment of older adult clients. Students begin socialization into the role of the Associate Degree Nurse as a member of an interdisciplinary healthcare team.

Prerequisite(s): Admission to the AS Nursing Program, BSC 1085C, ENC 1101, (MAC 1105 OR STA 2023)

Corequisite(s): NUR 1021L

Prereq/Corequisites: BSC 1086C, HUN 2201

Special Nursing Program policies may apply to this course.

NUR 1021L - Nursing Process I Clinical Experience

4 Credit Hours
(Fall, Spring)

This course introduces students to the role of the Associate Degree Nurse in providing direct, holistic nursing care to young, middle-aged and older adults who are hospitalized or in community settings. Students are introduced to all steps of the nursing process with a focus on assessment skills. Students will identify self-learning needs and set their own goals for improvement. Critical thinking and working effectively with peers and other healthcare professionals as a team member is expected. The demonstration of caring behaviors and therapeutic communication as a provider of bedside, technical nursing care is emphasized. Students must demonstrate safe performance of basic nursing skills, including but not limited to medication administration, physical assessment, and comfort care.

Prerequisite(s): Admission to the AS Nursing Program

Corequisite(s): NUR 1021C.

Special Nursing Program policies may apply to this course.

NUR 1141 - Pharmacologic Principles in Nursing I

1 Credit Hour
(Fall, Spring)

This course introduces students to concepts and principles of pharmacology related to safe administration of therapeutic agents within the nursing process framework. Students begin to learn major drug classifications and selected exemplars along with principles of safe, effective administration of drugs. Students will learn dosage calculations, factors that affect the absorption, excretion, distribution, and metabolism of drugs, as well as drug actions, adverse effects, and interactions.

Prerequisite(s): Admission to the AS Nursing Program

Special Nursing Program policies may apply to this course.

NUR 1142 - Pharmacologic Principles in Nursing II

1 Credit Hour
(Fall, Spring)

An introduction to the role of the associate degree nurse in providing direct, holistic nursing care to young, middle-aged and elderly adults who are hospitalized or receiving care in community settings. Emphasis is on applying all steps of the nursing process with focus on assessment skills. Pre-requisite college foundation and nursing courses provide theoretical bases for nursing care. Critical thinking is an expected behavior along with skills in working ethically and effectively with peers and other health care professionals as a team member; demonstrate caring behaviors and therapeutic communication with clients as a provider of bedside, technical nursing care. The student is expected to demonstrate safe performance of basic nursing skills, e.g., medication administration, physical assessment and comfort care of hospitalized adults and nursing home residents.

Prerequisite(s): NUR 1141 or LPN licensure and admission to the Nursing Program

Corequisite(s): NUR 1231C and NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 1231C - Nursing Process II

5 Credit Hours
(Fall, Spring)

Application of the nursing process continues with emphasis on the planning and implementation of nursing care for clients experiencing threats to functional health patterns. Development of professional behaviors, such as developing therapeutic relationships continues with students working clients through life interactions. Students further develop critical thinking skills through case studies and simulation scenarios designed to provide students with problem solving skills in analyzing, planning and prioritizing care for clients whose health problems are more acute or chronic; the client with psycho-emotional dysfunctions, dysfunctional support systems situations, grief, and loss. Students learn basic management skills as a team member caring for a limited number of clients in hospitals with emphasis on coordination of nursing care and discharge planning. Conflict management skills are highlighted as the student increases role as client advocate.

Prerequisite(s): NUR 1021L NUR 1021C and NUR 1141;or LPN licensure; admission to the AS Nursing Program or permission from the program director

Corequisite(s): NUR 1750L and NUR 1142

Prereq/Corequisites: DEP 2004

Special Nursing Program policies may apply to this course.

NUR 1750L - Nursing Process II - Clinical Experience

4 Credit Hours
(Fall, Spring)

This course builds on competencies presented in Nursing Process I regarding the role of the Associate Degree Nurse in providing direct, holistic nursing care for adult clients experiencing dysfunctional health patterns. Clinical experiences in hospitals, clinics, and community settings provide students with opportunities to apply the nursing process in care of clients, including the older adult. Students continue to develop management skills through conflict

management and other professional behaviors. Students demonstrate safe performance of all basic and more complex nursing skills.

Prerequisite(s): NUR 1021L or LPN licensure

Corequisite(s): NUR 1231C.

Special Nursing Program policies may apply to this course.

NUR 2233C - Nursing Process III

6 Credit Hours
(Fall, Spring)

Students continue to use the nursing process and critical thinking with emphasis on primary and secondary prevention as nursing interventions in clients experiencing threats to functional health patterns, including during the childbearing process and children whose normal lines of defense have been invaded by stressors to the degree that hospitalization is necessary. Nursing practice issues continue to focus on ethical-legal issues related to acute and/or chronic illness and disability. Management skills include delegation and career development.

Prerequisite(s): NUR 1231C & NUR 1142 or approval from the program director.

Corequisite(s): NUR 2233L

Prereq/Corequisites: MCB 2010C

Special Nursing Program policies may apply to this course.

NUR 2233L - Nursing Process III – Clinical Experience

4 Credit Hours
(Fall, Spring)

Students continue to apply knowledge and skills learned in previous nursing courses in providing nursing care for the hospitalized child, the family during the maternity cycle, and adults whose health problems are more complex and/or chronic. Clinical sites include hospitals, health departments, clinics, physician offices, schools and other community settings. Conflict resolution skills are applied, as needed, to meet client and/or peer learning goals. Delegation skills with peers are also practiced. Students demonstrate continuation of all previously learned nursing skills and must perform safely all advanced nursing skills in this clinical course.

Prerequisite(s): NUR 1750L

Corequisite(s): NUR 2233C.

Special Nursing Program policies may apply to this course.

NUR 2241C - Nursing Process IV

5 Credit Hours
(Fall, Spring)

Students integrate knowledge and principles of the biophysical and psychosocial sciences to solve life-threatening problems that affect a limited number of critically ill clients in a variety of clinical settings. Students differentiate

holistic nursing care therapies in primary, secondary and tertiary care settings. Students become proficient in applying all steps in the nursing process with emphasis on evaluating nursing care outcomes. Students apply critical thinking skills in exploring case-based practice situations and work together in simulation seminars to select effective client care improvement processes. Self-evaluation is part of the socialization process to prepare students for the work world as competent, caring staff nurses. Nursing practice issues include licensure standards and continued professional development.

Prerequisite(s): Permission from the Director of Nursing or NUR 2233C; MAC 1105 or STA 2023

Corequisite(s): NUR 2241L, NUR 2811L

Prereq/Corequisites: SYG 2000

Special Nursing program policies may apply to this course.

NUR 2241L - Nursing Process IV – Clinical Experience

3 Credit Hours
(Fall, Spring)

Students apply knowledge and principles of the biophysical and psychosocial sciences to assess, plan, implement and evaluate holistic nursing care of critically ill adults in hospitals, ambulatory care settings, and the home. Students will expand on management of care skills in preparation for their four-week clinical practicum prior to graduation from the program. Students will also shadow a home health/hospice nurse in observing treatment and palliative care of adults and children. Other clinical activities will include experiences in the emergency department and critical care units. Students must demonstrate competency in all behaviors required for an Associate Degree Nursing graduate.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2811L

Special Nursing Program policies may apply to this course.

NUR 2811L - Nursing Practicum

3 Credit Hours
(Fall, Spring)

This course is a capstone course and provides a time during the last four weeks of the nursing program in which students begin to transition from the student role into the graduate role as an associate degree nurse. Students attend seminar hours and complete standardized testing for evaluation in proficiency in applying all steps in the nursing process with emphasis on evaluating safe nursing care outcomes. Students complete clinical practice hours with an experienced registered nurse preceptor to provide holistic nursing care for a limited number of clients. The focus is on demonstration of all professional behaviors and competencies expected of the associate degree registered nurse graduate at entry level. Clinical experiences provide hands-on learning opportunities, enhancing clinical thinking, safe nursing judgment, and clinical confidence in skills. Clinical experiences take place in a variety of clinical settings and work schedules.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2241L

Special Nursing Program policies may apply to this course.

LPNs who successfully complete NUR 1142, NUR 1231C, NUR 1750L, NUR 2233C and NUR 2233L will receive credit for NUR 1021C, NUR 1021L, and NUR 1141.

Total Core Credits Required: 52

Technical Electives (Not Required)

NSP 2049L - Nursing Practice Readiness

1 Credit Hour
(Fall, Spring)

This elective laboratory course assists the nursing student to prepare for the RN licensure examination (NCLEX-RN). Web-based instructional methodologies allow the student to complete the course within a self-paced time frame. Students practice test taking skills, self-evaluation and other strategies to gain confidence in sitting for the NCLEX-RN.

Prerequisite(s): NUR 2241C or permission from Nursing Program Director.

Special Nursing Program policies may apply to this course.

NUR 1940L - Nursing Clinical Externship

3 Credit Hours
(Summer)

This elective course is designed to offer students the opportunity to gain additional clinical skills practice during the summer semester. Working with a preceptor and the nursing faculty in area hospitals, clinics, or community settings , the student will be able to perform all skills learned in successfully completed nursing courses.

Prerequisite(s): admission to the AS Nursing Program; NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 2931 - Special Topics in Associate Degree Nursing

1 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2932 - Special Topics in Associate Degree Nursing

2 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree

Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2933 - Special Topics in Associate Degree Nursing

3 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2934 - Special Topics in Associate Degree Nursing

4 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2935 - Special Topics in Associate Degree Nursing

5 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

Total Program Credits Required: 72

Suggested Two Year Academic Plan

This program admits students twice per year to being NUR courses in the fall and spring semesters. Below is a sample academic plan for these students admitted in the identified semester.

Nursing (AS) (NURS)

First Year

Summer or Fall Semester

BSC 1085C - Anatomy and Physiology I **4 Credit Hours ♦**

ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**

Mathematics Core General Education course* 3 Credit Hours ♦

Total Semester Hours: 10

Fall or Spring Semester ("Semester 1 in Nursing Program")

BSC 1086C - Anatomy and Physiology II **4 Credit Hours**

HUN 2201 - Nutrition **3 Credit Hours**

NUR 1021C - Nursing Process I **6 Credit Hours**

NUR 1021L - Nursing Process I Clinical Experience **4 Credit Hours**

NUR 1141 - Pharmacologic Principles in Nursing I **1 Credit Hour**

Total Semester Hours: 18

Spring or Fall Semester ("Semester 2 in Nursing Program")

DEP 2004 - Human Growth and Development **3 Credit Hours**

Humanities Core General Education Course **** 3 Credit Hours ♦**

NUR 1231C - Nursing Process II **5 Credit Hours**

NUR 1750L - Nursing Process II - Clinical Experience **4 Credit Hours**

NUR 1142 - Pharmacologic Principles in Nursing II **1 Credit Hour**

Total Semester Hours: 16

Second Year

Fall or Spring Semester ("Semester 3 in Nursing Program")

MCB 2010C - Microbiology, Allied Health **4 Credit Hours**

NUR 2233C - Nursing Process III **6 Credit Hours**

NUR 2233L - Nursing Process III – Clinical Experience **4 Credit Hours**

Total Semester Hours: 14

Spring or Fall Semester ("Semester 4 in Nursing Program") SYG 2000 - Sociology **3 Credit Hours ❖ ♦** or PSY 2012 - Psychology **3 Credit Hours ♦** NUR 2241C - Nursing Process IV **5 Credit Hours** NUR 2241L - Nursing Process IV – Clinical Experience **3 Credit Hours** NUR 2811L - Nursing Practicum **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 72
***** While any Core General Education Mathematics course is acceptable, Statistics (STA 2023) should be strongly considered because it is a required course in the RN to BSN program. ****** AS Core General Education Humanities include the Speaking-Across-the-Curriculum (SATC) requirement. Students who already have a humanities course that does NOT include SATC, may take another humanities course that meets the SATC requirement or a speech course.

Office Administration

Associate in Science

Office Administration (AS)

Admission Program Objective Code OFFA
State CIP Code 1552020401

Students who successfully complete selected technical courses in this program may also be eligible to receive the college credit certificates in Office Specialist (CCC) (State CIP Code 0552040704), Medical Office Management (CCC) (State CIP Code 0551071605), Office Management (CCC) (State CIP Code 05520200401).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles.

A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office

applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Administration (AS) (OFFA)	Companion Certificate*		
First Year	OFSP	MEOM	OFMT
Fall Semester			
Mathematics General Education **3 Credit Hours**			
ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶**			
CGS 1100 - Microcomputer Applications **3 Credit Hours ▲** or CGS 1570 - Computer Applications for Business **3 Credit Hours**	√ √	√ √	√ √

OST 1107 - Word Processing I **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Spring Semester Science General Education Course **3 Credit Hours** Additional General Education Credits **3 Credit Hours** OST 2117 - Word Processing II **3 Credit Hours** OST 1355 - Records Management **3 Credit Hours** ENC 2210 - Technical Report Writing **3 Credit Hours** **Total Semester Hours: 15**	 √ 	 √ 	 √
Second Year			
Fall Semester ACG 2001 - Accounting I **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Social Science General Education **3 Credit Hours** GEB 1011 - Introduction to Business **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**			
Spring Semester OST 2401 - General Office Management **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**	 √ 	 √ √ 	 √ √
Total Program Hours: 60			

* Courses with √ can also be used in the Companion Certificate indicated: OFSP - Office Specialist (CCC) MEOM - Medical Office Management (CCC) OFMT - Office Management (CCC)			

College Credit Certificate

Office Management (CCC)

Admission Program of Study Code OFMG
State CIP Code 0552020401

Students who successfully complete this certificate may be eligible to receive credits towards the Office Administration (AS) degree (State CIP Code 1552020401).

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other

word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 15

Technical Elective Courses

Select 12 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the

student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Technical Elective Credits Required: 12

Total Program Credits Required: 27

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Management (CCC) (OFMT)
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** OST 1107 - Word Processing I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester OST 2401 - General Office Management **3 Credit Hours** OST 2117 - Word Processing II **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 27

Office Specialist (CCC)

Admission Program of Study Code OFSP
State CIP Code 0552040704

Students who successfully complete this certificate may be eligible to receive credits towards the Office Administration (AS) degree (State CIP Code 1552020401).

Core Courses

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

or

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 12

Technical Elective Courses

Select 6 credits from the following:

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office

applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if

applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Technical Elective Credits Required: 6

Total Program Credits Required: 18

Suggested Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Office Specialist (CCC) (OFSP)
Fall Semester CGS 1100 - Microcomputer Applications **3 Credit Hours** ▲ or CGS 1570 - Computer Applications for Business **3 Credit Hours** OST 1107 - Word Processing I **3 Credit Hours** OST 2335 - Business Communications **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Spring Semester OST 1355 - Records Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 9**
Total Program Hours: 18

Paralegal Studies

Associate in Science

Paralegal Studies (AS)

Admission Program Objective Code PARA
State CIP Code 1722030200

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**

- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1003 - Introduction to Paralegal Studies

3 Credit Hours
(Fall)

This course is designed to give students a broad understanding of the nature of the paralegal profession and the elements contained within the profession, as well as its responsibility.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1114 - Legal Research and Writing

3 Credit Hours
(Spring)

This course is designed to provide the student with necessary skills and knowledge required in legal research/case analysis and legal writing.

Prerequisite(s): PLA 1003 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1600 - Wills, Trusts, and Probate

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of estate planning, wills, and probate administration.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2273 - Tort Law

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of tort law with objectives centered on personal injury torts.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Total Core Credits Required: 27

Technical Elective Courses

Select 15 credits from the following:

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2949 - Internship - Paralegal

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): completion of a minimum of 12 credit hours in the appropriate discipline, including PLA 1003 and permission of the instructor is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

*This college credit course is not intended for transfer and may not be applied toward the AA degree.

Total Technical Elective Credits Required: 15

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Paralegal Studies (AS) (PARA)
First Year
Fall Semester PLA 1003 - Introduction to Paralegal Studies **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** Mathematics General Education **- 3 Credit Hours** Technical Elective **3 Credit Hours** PLA 1005 - Legal Terminology **3 Credit Hours** OR PLA 1013 - Introduction to the Legal System **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester BUL 2241 - Business Law I **3 Credit Hours** PLA 1114 - Legal Research and Writing **3 Credit Hours** Humanities General Education **- 3 Credit Hours** Social Science General Education **- 3 Credit Hours** PLA 1013 - Introduction to the Legal System **3 Credit Hours** OR PLA 1005 - Legal Terminology **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester

PLA 2273 - Tort Law **3 Credit Hours** Science General Education **- 3 Credit Hours** PLA 1600 - Wills, Trusts, and Probate **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Spring Semester PLA 1203 - Civil Procedure **3 Credit Hours** PLA 1800 - Introduction to Family Law **3 Credit Hours** Additional General Education Credits **3 Credit Hours** Technical Elective **- 3 Credit Hours** Technical Elective **- 3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Radiography

Associate in Science

Radiography (AS)

Admission Program Objective Code RADT
State CIP Code 1351090700

The Radiography program is based on selective admission, subject to additional policies and licensure requirements. Students attend classes at the Niceville Campus, and are assigned to clinical rotations at various healthcare facilities in the district. Graduates are eligible to sit for the ARRT certification exam. For additional information contact the Health Technology Department at (850) 729-6444.

Please note: In order to be a part of the **Radiography program applicant pool**, students must declare Radiography as their intended major on the online admissions application.

General Education

Unless otherwise noted, select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ - Communication Skills **3 Credit Hours**

- ____ ____ - Humanities **3 Credit Hours**

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

MAC 1105 - College Algebra , an equivalent, or higher level math course **3 Credit Hours**

Total General Education Credits Required: 20

Core Courses

RTE 1000 - Introduction to Radiologic Technology

2 Credit Hours
(Summer, Offered as needed)

This course is designed to provide an overview of the history of radiography and the role and scope of practice of the practitioner in the healthcare delivery system. Organizations, accreditation, federal agencies, regulatory agencies (including OSHA) and professional credentialing will be discussed. Content includes a fundamental background in medical law, ethics, human diversity and patient consent. The student will examine a variety of ethical issues and dilemmas found in clinical practice, as well as developing a better understanding of patients, the patient's families, and professional peers through comparison of diverse populations based on value systems, cultural and ethnic influences, communication styles and socioeconomic influences. Radiographic medical terminology and pharmacology will be covered. Site specific clinical education paperwork will be completed and students will perform required clinical observations in imaging departments. Background check, drug screening, training and clinical site approval mandatory.

Prerequisite(s): admission to the Radiography Program.

RTE 1111 - Introduction to Radiographic Patient Care

2 Credit Hours
(Fall)

This course is designed to prepare radiography students to provide basic patient care. Basic concepts of patient care will be described, as well as infection control procedures and standard precautions. This course includes hospital specific training. Health risks, life stages, HIV/AIDs and domestic violence will be discussed. This course also includes an introduction to medical and radiographic terminology. Topics include vital signs, venipuncture, body mechanics and transport, verbal/nonverbal communication, and some pharmacology.

Prerequisite(s): admission to the Radiography Program.

RTE 1418 - Radiographic Techniques I

3 Credit Hours
(Fall)

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. This course introduces the student to a comprehensive study and theory of the production of x-rays and primary exposure factors of radiographic imaging. The image parameters of density, contrast, recorded detail, image distortion and blur will be studied as well as ancillary devices and equipment required to produce a quality radiographic image. Digital imaging with related accessories will be emphasized. Class demonstrations and exercises are used to demonstrate application of theory.

Prerequisite(s): MAC 1105 or other Gordon Rule math course and admission to the Radiography Program.

RTE 1457C - Radiographic Techniques II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1418 Radiographic Techniques I. Course content includes the basics of magnetism, electricity, motors, generators, rectifying systems, x-ray tube and filament circuitry. Topics in electromagnetism such as self and mutual induction, high voltage transformation, and AC rectification will be emphasized. An introduction of special radiographic methods will include automatic exposure control, computers, fluoroscopy and image intensification, subtraction radiography, conventional tomography, digital image receptors, and digital image acquisition and manipulation.

Prerequisite(s): RTE 1418.

Corequisite(s): RTE 1513C

RTE 1503C - Radiographic Procedures I

4 Credit Hours
(Fall)

This course is designed to provide the Radiography student with instruction in radiographic examinations of the chest, abdomen, upper extremity and lower extremity. An introduction to medical and radiographic terminology, radiographic anatomy, and image critique are also included.

Prerequisite(s): BSC 1085C and admission to the Radiography program.

RTE 1513C - Radiographic Procedures II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1503C. It is designed to provide the student with instruction in radiographic procedures and anatomy in the distal extremities, hip region, spine, ribs, and sternum and the cranium. Critical thinking, medical and radiographic terminology, as well as image critique are emphasized.

Prerequisite(s): RTE 1503C, RTE 1804L , and BSC 1086C

Corequisite(s): RTE 1814L.

RTE 1804L - Radiography Clinical Education I

3 Credit Hours
(Fall)

This course involves the practical application of the theories covered in RTE 1503C and RTE 1000. Rotations provide experience with various imaging systems, protocols, and patient care. Students observe, assist and perform basic radiographic procedures (chest, abdomen and extremities) under direct supervision. This course emphasizes patient care and critical thinking. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1000

Corequisite(s): RTE 1503C

RTE 1814L - Radiography Clinical Education II

3 Credit Hours
(Spring)

This course is a continuation of Radiography Clinical Education I. This clinical training emphasizes lower and upper extremity. Medical and radiographic terminology, patient care, critical thinking and communication skills are emphasized. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1804L

Corequisite(s): RTE 1513C.

RTE 1824L - Radiography Clinical Education III

4 Credit Hours
(Summer)

This course is a continuation of Radiography Clinical Education II. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I and II. The student will gain experience and develop clinical competence in general radiographic procedures such as the cranium and specialized contrast studies. Advanced

patient care skills, critical thinking, imaging and exposure techniques, radiation protection application and image processing will be emphasized. This rotation covers clinical experience in all phases of fundamental radiologic procedures and image critique. Students will rotate through ancillary departments in this course.

Prerequisite(s): RTE 1814L

Corequisite(s): RTE 2523C.

RTE 2061 - Radiographic Preparation for Practice

4 Credit Hours
(Spring)

This course is designed review information in preparation for the student to take the American Registry of Radiologic Technologist (ARRT) registry examination. The course will cover patient care and education, image production, equipment operation and maintenance, radiographic procedures and radiation protection. The student will also be given simulated registry examinations for practice and assessment purposes.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2854L.

RTE 2385 - Radiographic Protection and Biology

3 Credit Hours
(Fall)

This course is designed to provide the student with an overview of the principles of interaction of ionizing radiation with living systems. Ionizing effects on molecules, cells, tissues and the body as a whole are presented, along with factors affecting biological response, including; acute, chronic, stochastic and non-stochastic effects. This course is also designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and healthcare organizations are incorporated, as are the various methods of monitoring radiation exposure and acceptable dose limit values.

Prerequisite(s): RTE 1000, RTE 1418, RTE 1457C, RTE 2523C

Corequisite(s): RTE 2844L.

RTE 2473 - Radiographic Quality Assurance

2 Credit Hours
(Fall)

This course is designed to introduce the radiography student to evaluation methodology of radiographic systems to assure consistency in the production of quality images. Image critique, fluoroscopy, malfunctions, and specifications are some of the topics covered in the course.

Prerequisite(s): RTE 1418, RTE 1457C

Corequisite(s): RTE 2844L.

RTE 2523C - Radiographic Procedures III

3 Credit Hours
(Summer)

This course is a continuation of RTE 1513C covering cranium procedures and positioning. It is designed to provide the student with instruction in more complex radiographic procedures such as fluoroscopy, urinary studies, bone age, trauma, pediatrics, mobile and surgical radiography. Included is instruction in additional modalities and studies such as CT, MRI, arthography, myelography, and vascular studies. Attention will be given to the specialized equipment, contrast media, critical thinking and techniques necessary to perform these procedures. Radiographic anatomy, pathology, and critique of images are included in this course.

Prerequisite(s): RTE 1513C

Corequisite(s): RTE 1824L.

RTE 2533C - Radiographic Procedures IV

2 Credit Hours
(Fall)

This is a continuation of RTE 2523C, with emphasis on special procedures and additional modalities. Students are required to complete observations hours within specialty areas.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L

RTE 2571 - Introduction to Computed Tomography

1 Credit Hour
(Spring)

This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency.

Prerequisite(s): RTE 1457C

RTE 2782 - Radiographic Pathology

3 Credit Hours
(Spring)

This course is designed to introduce theories of disease causation and the pathophysiologic disorder that compromise healthy persons. Etiology, pathophysiologic responses, clinical manifestations, and radiographic appearance of alterations in body systems will be presented. Emphasis will be placed on pathological findings on diagnostic radiographic images.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2854L.

RTE 2844L - Radiography Clinical Education IV

5 Credit Hours
(Fall)

This course is a continuation of RTE 1824L. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I, II and III. The student will gain experience and develop clinical competence in specialized imaging procedures, and mobile, surgical and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 1824L

Corequisite(s): RTE 2385.

RTE 2854L - Radiography Clinical Education V

5 Credit Hours
(Spring)

This course is a continuation of RTE 2844L. The terminal objective for this course is to prepare the student for employment as an entry level technologist. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I-IV and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2061.

> **All RTE courses must be completed with a grade of 75 or higher to progress in the Radiography Program.**

Total Core Credits Required: 57

Total Program Credits Required: 77

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Radiography (AS) (RADT)
First Year
Summer Semester BSC 1085C - Anatomy and Physiology I **4 Credit Hours ♦** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** MAC 1105 - College Algebra **3 Credit Hours ♦**

RTE 1000 - Introduction to Radiologic Technology **2 Credit Hours**

Total Semester Hours: 12

Fall Semester

BSC 1086C - Anatomy and Physiology II **4 Credit Hours**

RTE 1111 - Introduction to Radiographic Patient Care **2 Credit Hours**

RTE 1503C - Radiographic Procedures I **4 Credit Hours**

RTE 1418 - Radiographic Techniques I **3 Credit Hours**

RTE 1804L - Radiography Clinical Education I **3 Credit Hours**

Total Semester Hours: 16

Spring Semester

RTE 1513C - Radiographic Procedures II **4 Credit Hours**

RTE 1457C - Radiographic Techniques II **4 Credit Hours**

RTE 1814L - Radiography Clinical Education II **3 Credit Hours**

DEP 2004 - Human Growth and Development **3 Credit Hours**

Total Semester Hours: 14

Summer Semester

Humanities General Education Course **3 Credit Hours**

RTE 1824L - Radiography Clinical Education III **4 Credit Hours**

RTE 2523C - Radiographic Procedures III **3 Credit Hours**

RTE 2571 - Introduction to Computed Tomography **1 Credit Hour**

Total Semester Hours: 11

Second Year

Fall Semester

RTE 2385 - Radiographic Protection and Biology **3 Credit Hours**

RTE 2473 - Radiographic Quality Assurance **2 Credit Hours**

RTE 2533C - Radiographic Procedures IV **2 Credit Hours**

RTE 2844L - Radiography Clinical Education IV **5 Credit Hours** **Total Semester Hours: 12**
Spring Semester RTE 2061 - Radiographic Preparation for Practice **4 Credit Hours** RTE 2782 - Radiographic Pathology **3 Credit Hours** RTE 2854L - Radiography Clinical Education V **5 Credit Hours** **Total Semester Hours: 12**
Total Program Hours: 77

Sports, Fitness and Recreation Management

Associate in Science

Sports, Fitness and Recreation Management (AS)

Admission Program Objective Code SPFR
State CIP Code 1731050701

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

Core Courses

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

LEI 1544 - Outdoor Recreation Management

3 Credit Hours
(Fall, Spring)

This course examines the fundamental influences on outdoor recreation. The course also provides information on hazards, conservation considerations, and safety factors in planning and organizing outdoor recreations. Basic first aid, CPR, and AED training is incorporated as it pertains to outdoor recreation. Field trips may be assigned as warranted.

PEM 1131A - Strength Training

3 Credit Hours
(Offered as needed)

This course is a high intensity lecture/demonstration and flexible lab hour weight training program designed to increase the size, strength, and endurance of the skeletal muscle system. Instruction includes, but is not limited to, weight training safety, etiquette, history, and nutrition. Instruction will be given in the design of progressive resistance programs to increase total body efficiency and to meet the objectives of the individual student. Students are responsible for determining fitness for training, and those with medical problems which restrict personal activities are encouraged to obtain medical clearance before enrolling in the course.

PET 1000 - Introduction to Physical Education

3 Credit Hours
(Offered as needed)

A study of the history of physical education and sport with particular emphasis placed on present practices and trends.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

Total Core Credits Required: 21

Technical Elective Courses

Select 21 credits from the following:

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CLP 1001 - Personal Adjustment

3 Credit Hours
(Fall, Spring, Summer)

Psychology of adjustment, application of psychological theory for problem solving and better mental health. An examination of psychological defense mechanisms and adaptive behavior.

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and

mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PEM 2108 - Fitness Lab

1 Credit Hour
(Offered as needed)

Instruction and participation in an exercise program with emphasis on muscle endurance, strength and flexibility.

Prerequisite(s): HLP 1081 or approved wellness assessment by the department chair.

This course may be taken up to four times for credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

- ____ ____ - Selected Activity Courses (PEL, PEM, PEO) **4 Credit Hours**
- ____ ____ - Other Approved College Credits

Total Technical Elective Credits Required: 21

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Sports, Fitness and Recreation Management (AS) (SPFR)
First Year
Fall Semester HSC 1400 - First Aid **3 Credit Hours** PET 1000 - Introduction to Physical Education **3 Credit Hours** ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** General Education Humanities Course **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HUN 2201 - Nutrition **3 Credit Hours** General Education Mathematics Course **3 Credit Hours** General Education Social Science Course **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Second Year
Fall Semester HSC 1100 - Health Education **3 Credit Hours** PEM 1131A - Strength Training **3 Credit Hours** General Education Science Course **4 Credit Hours**

Additional General Education Credits **2 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester HLP 1081 - Wellness: Practice and Theory **3 Credit Hours** PET 2622 - Care and Prevention of Athletic Injuries **3 Credit Hours** LEI 1544 - Outdoor Recreation Management **3 Credit Hours** Technical Elective **3 Credit Hours** Technical Elective **3 Credit Hours** **Total Semester Hours: 15**
Total Program Hours: 60

Theatre and Entertainment Technology

Associate in Science

Theater and Entertainment Technology - Acting Specialization Option (AS)

Admission Program Objective Code THTA
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the college credit certificate in Stage Technology (Theater & Entertainment) (CCC) (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2120 - Improvisation

3 Credit Hours
Offered as needed

This course explores the use of creativity and imagination, engaging the actor in a wide variety of improvisational theatre games.

TPP 2141 - Acting in Shakespeare

3 Credit Hours
(Offered as needed)

This course is an introduction to the concepts, principles, and skills needed to develop characters in Shakespeare's plays. The course focuses on the hidden clues in the text to discover character choices and meaning. Specific analysis and the techniques of scansion are introduced as they relate to character interpretation. Application of these techniques will be presented in scenes and monologues.

TPP 2150 - Advanced Scene Study

3 Credit Hours
(Fall)

This course is a continuation of the processes and concepts of TPP 2111, Acting II, with the addition of new techniques to create dynamic and engaging characterizations through performance.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2533 - Stage Combat I (Unarmed & Rapier)

3 Credit Hours
(Spring)

Through in-class study and performance the student will develop an understanding of and proficiency in the safe techniques of unarmed and rapier stage combat which are required of a theatrical performer. Application of these techniques will be presented in two scenes, one for unarmed and one for rapier.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two-Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Acting Specialization Option (AS) (THTA)	Companion Certificate*
First Year	
Fall Semester Communications General Education Course **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** THE 2304 - Script Analysis **3 Credit Hours** TPP 2110 - Acting I **3 Credit Hours** SPC 1608 - Public Speaking **3 Credit Hours †** or SPC 2300 - Interpersonal Communication **3 Credit Hours †** **Total Semester Hours: 15**	 √ √ √
Spring Semester TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** TPP 2111 - Acting II **3 Credit Hours** TPP 2220 - Auditioning **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Mathematics General Education Course **3 Credit Hours** **Total Semester Hours: 15**	 √ √ √
Second Year	
Fall Semester Natural Science General Education Course **3 Credit Hours** TPP 2120 - Improvisation **3 Credit Hours** TPP 2150 - Advanced Scene Study **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** TPP 1190 - Rehearsal and Performance I **3 Credit Hours** **Total Semester Hours: 15**	 √

Spring Semester TPP 2533 - Stage Combat I (Unarmed & Rapier) **3 Credit Hours** TPP 1191 - Rehearsal and Performance II **3 Credit Hours** TPP 2141 - Acting in Shakespeare **3 Credit Hours** TPP 1940 - Internship in Theatre Performance **3 Credit Hours** Social Science General Education Course **3 Credit Hours** **Total Semester Hours: 15**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC)	

Theater and Entertainment Technology - Costuming Specialization Option (AS)

Admission Program Objective Code THTC
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the Stage Technology (Theater & Entertainment) (CCC) certificate (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

HUM 1905A - Independent Study – Arts and Humanities

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue nonscheduled academic and laboratory work which

may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): approval from department chair, a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2331 - Costume Construction

3 Credit Hours
(Offered as needed)

An introduction to costume construction techniques and wardrobe design. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in costume construction.

Prerequisite(s): TPA 2232

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1192 - Rehearsal and Performance III

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1191.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2930 - Theater Performance – Special Topics

3 Credit Hours
(Fall, Spring, Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Costuming Specialization Option (AS) (THTC)	Companion Certificate*
First Year	STGT
Summer Semester	
TPA 1290 - Technical Theatre Lab I **1 Credit Hour**	√
HUM 1905A - Independent Study – Arts and Humanities **1 Credit Hour**	√
Total Semester Hours: 2	
Fall Semester	
Communications General Education Course **3 Credit Hours**	
Speech General Education Course **3 Credit Hours**	

TPP 2110 - Acting I **3 Credit Hours** TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** **Total Semester Hours: 12**	
Spring Semester Social Science General Education Course **3 Credit Hours** TPA 2220 - Lighting Design **3 Credit Hours** TPP 1190 - Rehearsal and Performance I **3 Credit Hours** TPA 2331 - Costume Construction **3 Credit Hours** **Total Semester Hours: 12**	 √ √ √
Summer Semester Natural Science General Education Course **3 Credit Hours** TPP 1191 - Rehearsal and Performance II **3 Credit Hours** **Total Semester Hours: 3**	 √
Second Year	
Fall Semester Mathematics General Education Course **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** THE 2304 - Script Analysis **3 Credit Hours** **Total Semester Hours: 12**	 √
Spring Semester TPA 1291 - Technical Theatre Lab II **1 Credit Hour** TPP 1192 - Rehearsal and Performance III **3 Credit Hours** THE 2300 - Dramatic Literature **3 Credit Hours † ¶** TPA 2063 - Principles of Scenic Design **3 Credit Hours** TPP 2930 - Theater Performance – Special Topics **3 Credit Hours**	

TPA 1940 - Internship in Theatre Design or Production **3 Credit Hours** **Total Semester Hours: 16**	
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC) (STGT)	

Theater and Entertainment Technology - Dance Specialization Option (AS)

Admission Program Objective Code THTD
State CIP Code 1650050202

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is

required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

Select 33 credits from the following:

DAA 1104 - Modern I for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to affect an understanding of the art of the modern dance. It includes a brief history of the dance; instruction and practice in basic dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time. This course maybe taken 4 times for credit.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1204 - Ballet I for Majors

2 Credit Hours
(Fall, Spring, Summer)

A beginning dance course designed to serve as an introduction to the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1681 - Dance Ensemble

1 Credit Hour
(Fall, Spring)

The student shall participate in the preparation and performance of original dance compositions to include Dance Line and Show Choir performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

(to be completed three times for audit)

DAA 2105 - Modern II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to further the student's understanding of the art of the modern dance. It includes continued study in history of the dance; instruction and practice in intermediate level dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2205 - Ballet II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance course is designed to serve as an further training in the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2610 - Dance Composition

2 Credit Hours
(Fall, Spring)

An introduction and practice in the application of compositional tools encourages the student to explore and compose dance. By studying the body's movement in time and space the student will improve technical skills, develop improvisation and choreographic skills and enhance overall dance performance. Previous dance experience is helpful.

This course may be taken up to four times for credit.

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography)

1 Credit Hour
(Fall, Spring)

This course includes the continuation of study and participation in all rehearsals of selected works of dance repertory and/or original choreography culminating in public performance.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAN 1750 - Dance Conditioning

1 Credit Hour
(Fall, Spring)

Dance Conditioning is an excellent course in which to begin your dance training. It is designed to improve fundamentals for the beginning/intermediate student through daily practice in floor work, yoga, and Pilates exercises. This movement class will get you ready to meet the challenges of other dance classes by toning, strengthening and preparing the body to move.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAN 2120 - Dance Appreciation

3 Credit Hours
(Offered as needed)

This course is a study of the development of dance as an art form, as entertainment, and how it relates to the history of cultures and societies, emphasizing the evolution of dance in the specific genres such as ballet, modern dance, jazz dance, and world dance forms. Designed to heighten student awareness of dance as an integral part of society and establish an appreciation of dance's impact on the making of art. This course will give the student a foundation level understanding of dance as an art form and its historical and cultural significance. The major periods of dance history, master choreographers, and their works will be explored through lecture, discussion and media presentation. DAN 2120 is not an activity course.

Total Technical Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Dance Specialization Option (AS) (THTD)
First Year
Summer Semester Communications General Education Course **3 Credit Hours** DAA 1200 - Fundamentals of Ballet **2 Credit Hours** **Total Semester Hours: 5**   **Fall Semester** Mathematics General Education Course **3 Credit Hours** DAA 1104 - Modern I for Majors **2 Credit Hours**

DAA 1204 - Ballet I for Majors **2 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1681 - Dance Ensemble - **Audit**

DAN 1750 - Dance Conditioning **1 Credit Hour**

DAN 2120 - Dance Appreciation **3 Credit Hours**

TPA 1210 - Stagecraft **3 Credit Hours**

Total Semester Hours: 16

Spring Semester

Natural Science General Education Course **3 Credit Hours**

DAA 1104 - Modern I for Majors **2 Credit Hours**

DAA 1204 - Ballet I for Majors **2 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1681 - Dance Ensemble - **Audit**

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography) **1 Credit Hour**

THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**

Total Semester Hours: 14

Second Year

Fall Semester

Humanities General Education Course **3 Credit Hours**

Speech Additional General Education Course **3 Credit Hours**

DAA 1681 - Dance Ensemble - **Audit**

DAA 2105 - Modern II for Majors **2 Credit Hours**

DAA 2205 - Ballet II for Majors **2 Credit Hours**

DAA 2610 - Dance Composition **2 Credit Hours**

DAN 1750 - Dance Conditioning **1 Credit Hour**

Total Semester Hours: 13

Spring Semester

Social Science General Education Course **3 Credit Hours**

DAA 2105 - Modern II for Majors **2 Credit Hours**

DAA 2205 - Ballet II for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography) **1 Credit Hour**

TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**

Total Semester Hours: 12

Total Program Hours: 60

Theater and Entertainment Technology - Music Theater Specialization Option (AS)

Admission Program Objective Code THTM
State CIP Code 1650050202

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed

as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1500 - Jazz I for Non-Majors

1 Credit Hour
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken four times for credit.
(to be completed twice for program credit)

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.
(to be completed twice for program credit)

DAA 1680 - Dance Workshop

1 Credit Hour
(Fall, Spring)

This course includes instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

This course may be taken up to four times for credit.
(to be completed four times for **audit**)

- MUN ____ - Music Ensembles (to be completed four times for **audit**)

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MVV 1211 - Applied Music – Voice I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour session per week, with a minimum of one hour daily practice.

This course may be taken up to four times for credit.

MVV 1311 - Applied Music - Voice I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in voice in the freshman year of study as the student's principal performing medium. This one hour weekly lesson is for intended voice majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which four memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVV 2221 - Applied Music – Voice II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour lesson per week, with a minimum of one hour daily practice.

Prerequisite(s): MVV 1211.

This course may be taken up to four times for credit.

MVV 2322 - Applied Music - Voice II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in voice in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended voice majors, and requires Division Chair Approval. A major component of this class is a required juried performance at the end of the semester for which six memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211, MVV 1311 and Division Chair approval.

This course may be taken up to four times for credit.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2250 - Introduction to Musical Theatre

3 Credit Hours
(Fall)

Introduction to the study of Musical Theater analysis, creation, and performance with an emphasis on singing, dancing, and acting.

Total Technical Elective Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Music Theater Specialization Option (AS) (THTM)
Summer Semester Speech General Education Course **3 Credit Hours** DAA 1200 - Fundamentals of Ballet **2 Credit Hours** **Total Semester Hours: 5**
First Year
Fall Semester Communications General Education Course **3 Credit Hours** MUT 1111 - Music Theory I **3 Credit Hours** MUT 1241 - Ear Training and Sight Singing I **1 Credit Hour** DAA 1500 - Jazz I for Non-Majors **1 Credit Hour** DAA 1680 - Dance Workshop - **Audit** MUN XXXX - Ensemble - **Audit** MVV 1211 - Applied Music – Voice I **1 Credit Hour**

TPP 2110 - Acting I **3 Credit Hours**

Total Semester Hours: 12

Spring Semester

Mathematics General Education Course **3 Credit Hours**

DAA 1500 - Jazz I for Non-Majors **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 2221 - Applied Music – Voice II **1 Credit Hour**

THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶**

TPP 2111 - Acting II **3 Credit Hours**

TPP 2220 - Auditioning **3 Credit Hours**

Total Semester Hours: 14

Second Year

Fall Semester

Natural Science General Education Course **3 Credit Hours**

MUL 1010 - Music Appreciation **3 Credit Hours † ♦ ¶**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 1311 - Applied Music - Voice I for Majors **2 Credit Hours**

TPA 1210 - Stagecraft **3 Credit Hours**

TPP 2250 - Introduction to Musical Theatre **3 Credit Hours**

Total Semester Hours: 15

Spring Semester

Social Science General Education Course **3 Credit Hours**

DAA 1504 - Jazz I for Majors **2 Credit Hours**

DAA 1520 - Tap I **1 Credit Hour**

DAA 1680 - Dance Workshop - **Audit**

MUN XXXX - Ensemble - **Audit**

MVV 2322 - Applied Music - Voice II for Majors **2 Credit Hours**

TPA 2232 - Introduction to Costuming Technology **3 Credit Hours**

TPP 1940 - Internship in Theatre Performance **3 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 60

Theater and Entertainment Technology - Technical Theater Specialization Option (AS)

Admission Program Objective Code THTT
State CIP Code 1650050202

Students who successfully complete selected courses from this program of study may be eligible to receive the Stage Technology (Theater & Entertainment) (CCC) certificate (State CIP Code 0650050201).

General Education

Select one course from each category; see the AS Degree General Education Requirements section of catalog for specific course listings:

- ____ ____ Communication Skills **3 Credit Hours**
- ____ ____ Humanities **3 Credit Hours**
- ____ ____ Mathematics **3 Credit Hours**
- ____ ____ Natural Sciences **3 Credit Hours**
- ____ ____ Social Sciences **3 Credit Hours**
- ____ ____ Additional General Education Credits **3 Credit Hours**

Total General Education Credits Required: 18

A proficiency exam may be required in major emphasis area(s).

Core Courses

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

Total Core Credits Required: 9

Technical Required Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 2276C - Entertainment Technology - Crafts

3 Credit Hours
(Spring)

This course presents the practices and principles of advanced woodworking, welding, smithing, casting, ceramics, plaster work, fiberglass and plastic technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented that will use items created in a realized production.

Prerequisite(s): TPA 1210.

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2292 - Technical Theatre Lab III

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1291

TPA 2301 - Technical Theatre Lab IV

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 2292

TPA 2343 - CAD for the Theatre

3 Credit Hours
(Offered as Needed)

This course is project oriented covering fundamental through advanced material in computer aided drafting and design and its application for the theatre.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

Total Technical Elective Credits Required: 33

Total Program Credits Required: 60

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Theater and Entertainment Technology - Technical Theater Specialization Option (AS) (THTT)	Companion Certificate*
First Year	STGT
Summer Semester Social Science General Education Course **3 Credit Hours** TPA 1290 - Technical Theatre Lab I **1 Credit Hour** **Total Semester Hours: 4**	
Fall Semester Communications General Education Course **3 Credit Hours** TPA 1210 - Stagecraft **3 Credit Hours** TPA 2212 - Sound Production for the Stage **3 Credit Hours** TPA 2343 - CAD for the Theatre **3 Credit Hours** THE 2304 - Script Analysis **3 Credit Hours** **Total Semester Hours: 15**	 √ √
Spring Semester	

TPA 1291 - Technical Theatre Lab II **1 Credit Hour** TPA 2063 - Principles of Scenic Design **3 Credit Hours** TPA 2220 - Lighting Design **3 Credit Hours** TPA 2232 - Introduction to Costuming Technology **3 Credit Hours** TPA 2276C - Entertainment Technology - Crafts **3 Credit Hours** **Total Semester Hours: 13**	√ √ √
Second Year	
Fall Semester Natural Science General Education Course **3 Credit Hours** Humanities General Education Course **3 Credit Hours** Speech Additional General Education Course **3 Credit Hours** TPA 2292 - Technical Theatre Lab III **2 Credit Hours** TPP 2110 - Acting I **3 Credit Hours** **Total Semester Hours: 14**	√
Spring Semester General Education Mathematics Course **3 Credit Hours** THE 2000 - Theatre Appreciation **3 Credit Hours † ♦ ¶** TPA 1940 - Internship in Theatre Design or Production **3 Credit Hours** TPA 2301 - Technical Theatre Lab IV **2 Credit Hours** TPA 2600 - Stage Management **3 Credit Hours** **Total Semester Hours: 14**	√
Total Program Hours: 60	
* Courses with √ can also be used in the Companion Certificate indicated: STGT - Stage Technology (Theater & Entertainment) (CCC)	

College Credit Certificate

Stage Technology (Theater & Entertainment) (CCC)

Admission Program of Study Code STGT
State CIP Code 0650050201

Students who successfully complete this certificate may be eligible to receive credits towards one of the following Theatre and Entertainment A.S. degree options:

- Theater and Entertainment Technology - Acting Specialization Option (AS) (State CIP Code 1650050202)
- Theater and Entertainment Technology - Costuming Specialization Option (AS) (State CIP Code 0650050202)
- Theater and Entertainment Technology - Technical Theater Specialization Option (AS) (State CIP Code 0650050202)

Core Courses

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

Total Core Credits Required: 17

Total Program Credits Required: 17

Welding

Vocational Certificate

Welding Technology (PSAV)

Admission Program of Study Code WELT
State CIP Code 0648050805

This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

Basic Skills Requirements: The student must be exempt or attain a **9th grade level** on each section of the TABE exam: Math, Language and Reading.

The night welding program is not accepting new students during the 2018-19 academic year.

Core Courses

PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

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PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides instruction and demonstration using Shielded Metal Arc Welding (SMAW). Topics include visually inspect of welds, and basic SMAW technical terminology. Basic structural welding techniques will be demonstrated in accordance with American Welding Society (AWS) D1.1 Structural Welding Code. Tack welding and metal joint fit of carbon steel is covered in this course.

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PMT 0122C - Basic Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course introduces structural fillet welds in different joint positions in accordance with AWS D1.1 Structural Welding Code. Fillet welds will be performed on carbon steel plate of various thicknesses.

Prerequisite(s): PMT 0121C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides the student with instruction on joint design, joint preparation, and fit-up, and performance of groove welds with backing. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds with backing and make acceptable groove welds with backing using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0122C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Spring, Summer)

This course provides the student with advanced instruction on joint design, joint preparation, and fit-up, and performance of open groove welds. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of open groove welds and make acceptable open groove welds in all positions using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0126C

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0134C - Gas Metal Arc Welding (GMAW)

50 Clock Hours
(Spring, Summer)

This course provides instruction and demonstration using the various transfer methods and techniques of Gas Metal

Arc Welding (GMAW). Topics included are safety, equipment set-up, joint design and preparation, and gases.

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PMT 0145C - Flux-Core Arc Welding (FCAW)

240 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Flux-Core Arc Welding (FCAW) and basic understanding of pipe welding. Welding symbols and blueprint reading are covered in this course.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0155C - Gas Tungsten Arc Welding (GTAW)

160 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to gas tungsten arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Gas Tungsten Arc Welding (GTAW), and basic understanding of pipe welding.

Total Program Hours Required: 1050

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Welding Technology (PSAV) (WELT) - Day Schedule
Fall Semester PMT 0106C - Welder Helper **150 Clock Hours** PMT 0111C - Metal Preparation **150 Clock Hours** PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

Total Semester Clock Hours: 525

Spring Semester

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0134C - Gas Metal Arc Welding (GMAW) **50 Clock Hours**

PMT 0145C - Flux-Core Arc Welding (FCAW) **240 Clock Hours**

PMT 0155C - Gas Tungsten Arc Welding (GTAW) **160 Clock Hours**

Total Semester Clock Hours: 525

Total Program Clock Hours: 1050

Welding Technology (PSAV) (WELT) - Night Schedule

Spring Semester

PMT 0106C - Welder Helper **150 Clock Hours**

PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0122C - Basic Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

Total Semester Clock Hours: 375

Summer Semester

PMT 0111C - Metal Preparation **150 Clock Hours**

PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW) **75 Clock Hours**

PMT 0134C - Gas Metal Arc Welding (GMAW) **50 Clock Hours**

Total Semester Clock Hours: 275

Fall Semester

PMT 0145C - Flux-Core Arc Welding (FCAW) **240 Clock Hours**

Total Semester Clock Hours: 400

Total Program Clock Hours: 1050

Welding Technology - Advanced (PSAV)

Admission Program of Study Code WELA
State CIP Code 0648050806

This program offers a broad foundation of knowledge and skills to prepare students for employment in the welding industry.

Core Courses

PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding

200 Clock Hours
(Offered as needed)

This course introduces the student to the practices and procedures of welding carbon steel pipe using the Shielded Metal Arc Weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation and fit-up. Upon completion, students should be able to demonstrate pipe positions, proper electrodes selection, proper joint geometry, joint preparation, fit-up, and proper SMAW pipe welding techniques in accordance with applicable codes.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0171C - SMAW-GTAW Pipe Welding

400 Clock Hours
(Offered as needed)

This course is designed to provide the students with skills in welding carbon steel pipe using Shielded Metal Arc Weld process and Gas Tungsten Arc Weld (GTAW) processes using proper filler metals in the 2G, 5G, and 6G positions. Upon completion, students should be able to perform shielded metal arc welding process and gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in the 2G, 5G, and 6G position in accordance with the applicable code.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

PMT 0173C - Specialty Pipe Welding

150 Clock Hours
(Offered as needed)

This courses covers advanced pipe welding and is designed to build advanced GTAW skills. This course covers advanced Gas Tungsten Arc Welding (GTAW) on alloy pipe and heavy wall carbon pipe.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

Total Program Hours Required: 750

Suggested Academic Plan

This program admits students in the fall/spring/summer. Below is a sample academic plan for these students in this clock hour program.

Welding Technology - Advanced (PSAV) (WELA) - Day Schedule
Summer Semester PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding **200 Clock Hours** **Total Semester Clock Hours: 200**
Fall Semester PMT 0171C - SMAW-GTAW Pipe Welding **400 Clock Hours** PMT 0173C - Specialty Pipe Welding **150 Clock Hours** **Total Semester Clock Hours: 550**
Total Program Clock Hours: 750

Welding Technology - Advanced (PSAV) (WELA) - Night Schedule
Spring Semester PMT 0171C - SMAW-GTAW Pipe Welding **400 Clock Hours** **Total Semester Clock Hours: 400**
Summer Semester PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding **200 Clock Hours**

PMT 0173C - Specialty Pipe Welding **150 Clock Hours** **Total Semester Clock Hours: 350**
Total Program Clock Hours: 750

Unmanned Vehicle/Drone

Associate in Science

Unmanned Vehicle Systems Operations - Business Development Specialization (AS)

Admission Program of Study Code DRO2

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear,

quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a

Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 2401 - GIS Applications in Social Science

3 Credit Hours
(Offered as Needed)

This course surveys the use of GIS for solving spatial problems in the social sciences. Examples from the fields of health, economic geography and real estate, housing, transportation, criminology, among others are used to illustrate how spatial techniques are used to address problems in a GIS environment. Special consideration will be given to the data needs of such operations, the implementation of methods in a GIS environment, and understanding the spatial assumptions and issues that underpin analyses.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 17
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Fire/Rescue Specialization (AS)

Admission Program of Study Code DRO1

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with

mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

FFP 1691 - Fundamentals of Firefighting & Unmanned Vehicles

3 Credit Hours
(Summer)

Course introduces the fundamentals of unmanned vehicle applications for firefighting with prioritization of manpower and equipment utilization. Fire officers explore the use of unmanned vehicles for fire ground commanders for tactical operations for all levels of fire. Emphasis for fire investigators on utilization of unmanned vehicles in the investigation process. Course introduces determination of fire cause and origin with collection of evidence by unmanned vehicles during fire scene investigation. Participants will explore the use unmanned vehicles for planning, responding, and evaluating HAZMAT incidents.

FFP 2692 - Unmanned Vehicles Applications and Search & Rescue

3 Credit Hours
(Fall)

This course examines the utilization of unmanned vehicles by public safety in various search and rescue operations. Students will be introduced to the utilization of unmanned vehicles during searches for suspects eluding capture. Course will examine the response protocol and interagency support utilizing unmanned vehicles in urban, water, and various terrain search and rescue operations. Students will be introduced to the operations of unmanned vehicles for silver and amber alerts.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours**

SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Law Enforcement Specialization (AS)

Admission Program of Study Code DRON

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

CJE 1735 - Unmanned Vehicle Legal Requirements and Case Law

3 Credit Hours
(Fall)

This course examines the legal requirements and limits of drone operation by law enforcement. The course will also introduce the student to case studies, guidelines, laws, and protocols for law enforcement operations in contrast to use by private citizens. Additionally, this case will examine and define expectations of privacy, based on case law as set forth by the United States Supreme Court. Case studies and Supreme Court decisions from the last century

based on the fourth amendment and due process of law, will be studied for class projects. Each student will be required to submit a research paper on a specific related topic as assigned by the instructor.

CJE 2736 - Law Enforcement Applications of Unmanned Vehicles for 21st Century

3 Credit Hours
(Fall)

This course will introduce students to current law enforcement uses and abilities of unmanned vehicle systems, along with new and developing applications for exclusive use in law enforcement actions. Students will understand and explain the definitions of privacy expectations as related to law enforcement actions governed by the fourth amendment. Students will be required to participate in a course project, in which students will develop, justify and define futuristic uses on drone technologies in the law enforcement field. In this team project, a presentation is required to defend the positions and uses of drone technologies as related in the project results.

DSC 1250 - Unmanned Vehicles Fundamentals for Disaster Management

3 Credit Hours
(Spring)

This course examines the protocol and interagency support concepts for the utilization of unmanned vehicles in preparation and response of catastrophic events. Students will be introduced to the development of an emergency response plan which will include unmanned vehicle concepts such as observation, communications, safety, training, and also integration between Public safety agencies.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

EMS 2350 - Unmanned Vehicles Applications and Operations for EMS

3 Credit Hours
(Summer)

This course examines the response of Emergency Medical Services to unsecure scenes with the aid of unmanned vehicles. Students will explore EMS protocols for the utilization of unmanned vehicles in catastrophic events with mass casualties requiring triage and multiple agency responses. Participants will be introduced to the concepts of the utilization of unmanned vehicles for support during large scale public events such as; conventions, festivals, athletic events, protest, and special team support.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours** ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 17**
Second Year
Fall Semester POS 1041 - American Government **3 Credit Hours ♦ ¶** PHY 1020 - Physical Science **3 Credit Hours ♦** Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours** PGY 1801C - Digital Photography I **4 Credit Hours** **Total Semester Hours: 16**
Spring Semester ASC 2564C - Unmanned Vehicle Security **4 Credit Hours** ASC 2949C - Unmanned Systems Practicum **4 Credit Hours** Specialization Technical Elective **3 Credit Hours** Specialization Technical Elective **3 Credit Hours** **Total Semester Hours: 14**
Total Program Hours: 62

Unmanned Vehicle Systems Operations - Payload Specialist Specialization (AS)

Admission Program of Study Code DRO3

State CIP Code 1615080102

General Education

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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▲ Technology-Across-the-Curriculum Course

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MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

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PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

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POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

Total General Education Credits Required: 18

Core Courses

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

Total Core Credits Required: 29

Specialization Elective Courses

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

Total Specialization Elective Credits Required: 15

Total Program Credits Required: 62

Suggested Two Year Academic Plan

This program admits students in the fall/spring/summer semester(s). Below is a sample academic plan for these students admitted in the identified semester.

Unmanned Vehicle Systems Operations (AS)
First Year
Fall Semester ENC 1101 - English Composition I **3 Credit Hours ♦ ▲ ¶** ATT 1100 - Private Pilot Ground School **3 Credit Hours** PHI 2600 - Introduction to Ethics **3 Credit Hours ❖ † ¶** ETI 1710 - Occupational Safety **3 Credit Hours** SLS 2505 - Critical Thinking **3 Credit Hours** **Total Semester Hours: 15**
Spring Semester MAC 1105 - College Algebra **3 Credit Hours ♦** ENC 2210 - Technical Report Writing **3 Credit Hours** ETM 1005C - Basic Mechanical Operations **3 Credit Hours**

ASC 2560C - Unmanned Aerial Vehicles & Systems **5 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 17

Second Year

Fall Semester

POS 1041 - American Government **3 Credit Hours ♦ ¶**

PHY 1020 - Physical Science **3 Credit Hours ♦**

Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

PGY 1801C - Digital Photography I **4 Credit Hours**

Total Semester Hours: 16

Spring Semester

ASC 2564C - Unmanned Vehicle Security **4 Credit Hours**

ASC 2949C - Unmanned Systems Practicum **4 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Specialization Technical Elective **3 Credit Hours**

Total Semester Hours: 14

Total Program Hours: 62

Developmental Education Courses

Developmental Education Courses

ENC 0017 - Integrated Reading and Writing I

4 Credit Hours
(Fall, Spring, Summer)

This course is designed to develop reading comprehension and writing language skills for students whose entry level placement scores do not meet requirements for degree credit (not applicable for degree completion). The course includes a thorough review of English grammar and conventions and practice in writing paragraphs and essays while building skills in vocabulary and academic reading comprehension. Students must pass the class with a "C" or better grade.

Prerequisite(s): Appropriate score on PERT or other approved assessment.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 0027 - Integrated Reading and Writing II

4 Credit Hours
(Fall, Spring, Summer)

This course is designed to develop reading comprehension and writing language skills for students whose entry level placement scores do not meet requirements for degree credit (not applicable for degree completion). The course includes a review of English grammar and convention and practice in writing persuasive essays while building skills in vocabulary and academic reading comprehension. Student must pass the class with a "C" or better grade.

Prerequisite(s): Minimum grade of "C" in ENC 0017 or appropriate PERT or other approved assessment score.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

ENC 0056 - Developmental Writing Module

2 College Prep Credits
(Offered as Needed)

This course is designed to develop written language skills for students whose entry placement scores do not meet requirements for degree credit courses (not applicable for degree completion). Conducted in a lab setting, this course is self-paced course, designed to allow students to focus on their individual grammar, usage, and writing needs to prepare for successful entry into college credit English courses (not applicable for degree completion). This course may be taken in place of ENC 0027 if a student has a placement score of 98-102 on the PERT. Students may exit Developmental Writing Module by passing the coursework and by obtaining a passing score on the Departmental Exit Exam.

Prerequisite(s): Students must score 98-102 on the PERT or on an elective basis score 103 or higher on the PERT.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0018 - Developmental Mathematics I

3 College Prep Credits
(Offered as needed)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit (not applicable for degree completion). It is designed to reinforce the knowledge of operations and applications of fractions, decimals, percents, and signed numbers. An introduction to algebra will also be covered. Students must pass this class with a "C" or better to move on to MAT 0028.

Prerequisite(s): A score of 50-95 on the PERT.

Corequisite(s): SLS 1101.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0022 - Developmental Mathematics Combined

6 Credit Hours
(Fall, Spring, Summer)

A course designed to satisfy the requirements of both MAT0018 and MAT0028 in one semester and prepare students for MAT1033A. Topics to be studied include computations with decimals, percents, integers, operations with rational and polynomial expressions, linear equations and inequalities in one variable, factoring, and basic linear graphing. This course will teach the student to understand and communicate concepts of algebra in the language of mathematics, both orally and written. Due to the nature of this course, calculators are not permitted. A grade of "C" or better is required for successful completion of this course. College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

Prerequisite(s): score of 50-95 on the PERT

Prereq/Corequisites: SLS 1101

MAT 0028 - Developmental Mathematics II

4 College Prep Credits
(Fall, Spring, Summer)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit (not applicable for degree completion). This course emphasizes concepts, techniques, and applications of the following topics: operations with real numbers, linear equations and inequalities in one variable, rational expressions, properties of exponents, polynomials, radical expressions, and graphs of lines.

Prerequisite(s): Grade of "C" or better in MAT 0018 or score of 96-113 on the PERT or on an elective basis a score of 114 or higher on the PERT

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0056 - Developmental Mathematics Module

2 College Prep Credits
(Fall, Spring, Summer)

This course is designed for students whose entry level placement test scores do not meet requirements for degree credit. This course emphasizes concepts, techniques, and applications of the following topics: operations with real

numbers, linear equations and inequalities in one variable, rational expressions; properties of exponents, polynomials, radical expressions, and graphs of lines. Student may exit Developmental Mathematics Module by passing the coursework and by obtaining a passing score on the Exit Exam.

Prerequisite(s): score of 105-109 on the PERT or elective basis score 110 or higher on the PERT

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

MAT 0157 - Modularized Developmental Mathematics II

4 College Prep Credits
(Fall, Spring)

This course is designed to help students develop computational & algebra skills needed for success in college level mathematics. This course uses a modular format in a lecture/lab setting. Students will take a diagnostic test in class to identify skills that have not been mastered and to determine placement into the appropriate modules. Each student will have an individualized learning plan such that he or she works only on skills not yet mastered. Possible topics in the learning plan include operations on signed numbers, solving linear equations and inequalities in one variable, graphing linear equations, operations with exponents and polynomial expressions, factoring polynomials and solving quadratic equations, introduction to rational expressions, and operations with square roots. Students will use computerized instruction as well as guided instruction by the instructor. Successful completion of this course requires mastery of the material in each module and a passing score of the department final exam. Course cannot be used toward AA or AS degree.

Prerequisite(s): MAT 0018 with a grade of "C" or better or a score of 96-113 on the PERT.

* College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

REA 0056 - Developmental Reading Module

2 College Prep Credits
(Fall, Spring, Summer)

This course is designed to increase the student's ability to comprehend college-level, written material (not applicable for degree completion). Conducted in a lab setting, this course is self-paced, designed to allow students to focus on their individual development of higher level reading skills and vocabulary needed for literal and critical interpretation of passages similar to those used in college texts. This course may be taken in place of REA 0017. Students must pass the class with a "C" or better and obtain a passing score on the end of course exam.

Prerequisite(s): Students must score 96-105 on the PERT or elective basis score 106 or higher on the PERT.

*College preparatory credits may not be counted toward fulfilling the number of credits required for a degree.

Directed Independent Study

Directed independent study provides opportunities for students to earn college credits in standard courses by working with a college instructor on an independent basis. Students enrolling for courses under Directed Independent Study (DIS) are expected to accomplish the goals and objectives as specified in the course syllabus and are expected to attend such class meetings, group sessions, and working conferences as specified by the instructor. Courses are scheduled on a flexible basis as approved by the instructor, the department chair, and by the Vice President of Academic Affairs with the understanding that final exams will be taken and grades awarded during the term in which they begin. All regular fees apply to DIS courses.

DIS course enrollments are authorized under the following conditions:

- A documented need exists for the student(s) to enroll for the course immediately rather than taking an alternate course or waiting until the next term in which the desired course would be offered.
- The student is able to identify an instructor who is willing to teach the course as DIS.
- The student understands the extensive burden which he or she is undertaking.
- Enrollment is approved by the Department Chair and Vice President of Academic Affairs.
- When it is not feasible for the course/section to be scheduled concurrently and taught at the same time and locations as another course/section.

Disclaimers

Notice to Students

The provisions of this publication are not to be construed as a contract between the student and Northwest Florida State College. The college reserves the right to change any provision or requirement when such action becomes necessary. Official announcements are available through the Office of Academic Affairs, posted in the Student Services Center, and when possible, listed in the Schedule of Classes. Students are responsible for meeting, in full, the appropriate requirements for graduation or program completion and are advised to work closely with counselors/advisors in planning of a program of study. Students are expected to familiarize themselves with all rules and regulations of the college.

Northwest Florida State College is dedicated to the concepts of equity and equal opportunity. It is the specific intention of the college not to discriminate on the basis of age, color, ethnicity, disability, marital status, national origin, race, religion, genetic information, or gender, in its employment practices or in the admission and treatment of students in its programs or activities. The Northwest Florida State College Equity Coordinator may be contacted at 850-729-5365 or in Human Resources in the Administration Building on the Niceville Campus (100 College Blvd., Niceville, FL). The Equity Coordinator is designated to coordinate compliance with the Florida Educational Equity Act and information about the availability of the colleges' grievance procedures. The Equity Coordinator is also coordinator of Title IX of the Education Amendments of 1972.

Accreditation

Northwest Florida State College is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award baccalaureate and associate degrees, certificates and diplomas. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Northwest Florida State College.

Accredited By

The Southern Association of Colleges and Schools
Commission on Colleges

Approved By

Florida State Department of Education

Member

Southern Association of Colleges and Schools
Florida College System Activities Association
Association of Florida Colleges

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General Course Information

Florida's Statewide Course Numbering System

Courses in this catalog are identified by prefixes and numbers that were assigned by Florida's Statewide Course Numbering System (SCNS). This numbering system is used by all public postsecondary institutions in Florida and by participating nonpublic institutions. The major purpose of this system is to facilitate the transfer of courses between participating institutions. Students and administrators can use the online SCNS to obtain course descriptions and specific information about course transfer between participating Florida institutions. This information is at the SCNS website at http://scns.fldoe.org.

Each participating institution controls the title, credit, and content of its own courses and recommends the first digit of the course number to indicate the level at which students normally take the course. Course prefixes and the last three digits of the course numbers are assigned by members of faculty discipline committees appointed for that purpose by the Florida Department of Education in Tallahassee. Individuals nominated to serve on these committees are selected to maintain a representative balance as to type of institution and discipline field or specialization.

The course prefix and each digit in the course number have a meaning in the SCNS. The listing of prefixes and associated courses is referred to as the "SCNS taxonomy." Descriptions of the content of courses are referred to as "statewide course profiles."

Examples of Course Identifiers

Prefix	**Level Code** (first digit)	**Century Digit** (second digit)	**Decade Digit** (third digit)	**Unit Digit** (fourth digit)	**Lab Code**
ENC	**1**	**1**	**0**	**1**	
English Composition	Lower (Freshman) Level at this institution	Freshman Composition	Freshman Composition Skills	Freshman Composition Skills I	No laboratory component in this course

General Rule for Course Equivalencies

Equivalent courses at different institutions are identified by the same prefixes and same last three digits of the course number and are guaranteed to be transferable between participating institutions that offer the course, with a few exceptions, as listed below in Exceptions to the General Rule for Equivalency.

For example, a freshman composition skills course is offered by 84 different public and nonpublic postsecondary institutions. Each institution uses "ENC_101" to identify its freshman composition skills course. The level code is the first digit and represents the year in which students normally take the course at a specific institution. In the SCNS taxonomy, "ENC" means "English Composition," the century digit "1" represents "Freshman Composition," the decade digit "0" represents "Freshman Composition Skills," and the unit digit "1" represents "Freshman Composition Skills I."

In the sciences and certain other areas, a "C" or "L" after the course number is known as a lab indicator. The "C" represents a combined lecture and laboratory course that meets in the same place at the same time. The "L" represents a laboratory course or the laboratory part of a course that has the same prefix and course number but meets at a different time or place.

Transfer of any successfully completed course from one participating institution to another is guaranteed in cases where the course to be transferred is equivalent to one offered by the receiving institution. Equivalencies are established by the same prefix and last three digits and comparable faculty credentials at both institutions. For example, ENC 1101 is offered at a community college. The same course is offered at a state university as ENC 2101. A student who has successfully completed ENC 1101 at a Florida College System institution is guaranteed to receive transfer credit for ENC 2101 at the state university if the student transfers. The student cannot be required to take ENC 2101 again since ENC 1101 is equivalent to ENC 2101. Transfer credit must be awarded for successfully completed equivalent courses and used by the receiving institution to determine satisfaction of requirements by transfer students on the same basis as credit awarded to the native students. It is the prerogative of the receiving institution, however, to offer transfer credit for courses successfully completed that have not been designated as equivalent. **NOTE**: Credit generated at institutions on the quarter-term system may not transfer the equivalent number of credits to institutions on the semester-term system. For example, 4.0 quarter hours often transfers as 2.67 semester hours.

The Course Prefix

The course prefix is a three-letter designator for a major division of an academic discipline, subject matter area, or subcategory of knowledge. The prefix is not intended to identify the department in which a course is offered. Rather, the content of a course determines the assigned prefix to identify the course.

Authority for Acceptance of Equivalent Courses

Section 1007.24(7), Florida Statutes, states:

Any student who transfers among postsecondary institutions that are fully accredited by a regional or national accrediting agency recognized by the United States Department of Education and that participate in the statewide course numbering system shall be awarded credit by the receiving institution for courses satisfactorily completed by the student at the previous institutions. Credit shall be awarded if the courses are judged by the appropriate statewide course numbering system faculty committees representing school districts, public postsecondary educational institutions, and participating nonpublic postsecondary educational institutions to be academically equivalent to courses offered at the receiving institution, including equivalency of faculty credentials, regardless of the public or nonpublic control of the previous institution. The Department of Education shall ensure that credits to be accepted by a receiving institution are generated in courses for which the faculty possess credentials that are comparable to those required by the accrediting association of the receiving institution. The award of credit may be limited to courses that are entered in the statewide course numbering system. Credits awarded pursuant to this subsection shall satisfy institutional requirements on the same basis as credits awarded to native students.

Exceptions to the General Rule for Equivalency

Since the initial implementation of the SCNS, specific disciplines or types of courses have been excepted from the guarantee of transfer for equivalent courses. These include courses that must be evaluated individually or courses in which the student must be evaluated for mastery of skill and technique. The following courses are exceptions to the general rule for course equivalencies and may not transfer. Transferability is at the discretion of the receiving institution.

1. Courses not offered by the receiving institution.
2. For courses at nonregionally accredited institutions, courses offered prior to the established transfer date of the course in question.
3. Courses in the _900-999 series are not automatically transferable, and must be evaluated individually. These include such courses as Special Topics, Internships, Apprenticeships, Practica, Study Abroad, Theses, and Dissertations.
4. Applied academics for adult education courses.

5. Graduate courses.
6. Internships, apprenticeships, practica, clinical experiences, and study abroad courses with numbers other than those ranging from 900-999.
7. Applied courses in the performing arts (Art, Dance, Interior Design, Music, and Theatre) and skills courses in Criminal Justice (academy certificate courses) are not guaranteed as transferable. These courses need evidence of achievement (e.g., portfolio, audition, interview, etc.).

Courses at Nonregionally Accredited Institutions

The SCNS makes available on its home page (http://scns.fldoe.org) a report entitled "Courses at Nonregionally Accredited Institutions" that contains a comprehensive listing of all nonpublic institution courses in the SCNS inventory, as well as each course's transfer level and transfer effective date. This report is updated monthly.

Questions about the SCNS and appeals regarding course credit transfer decisions should be directed to Northwest Florida State College, Office of the Vice President of Instruction or to the Florida Department of Education, Office of Articulation, 1401 Turlington Building, Tallahassee, Florida 32399-0400. Special reports and technical information may be requested by calling the SCNS office at (850) 245-0427 or at http://scns.fldoe.org.

Lower Division College Credit Courses

Lower Division College Credit Courses

ACG 2001 - Accounting I

3 Credit Hours
(Fall)

This course covers the fundamental principles and procedures of double entry accounting as applied to the financial records of a business entity. The preparation of an income statement, statement of owner's equity and balance sheet are emphasized. Specific transactions and internal control associated with cash, accounts receivable and inventory will be examined in detail. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): MTB 1103 and knowledge of basic computer and keyboarding skills are strongly recommended

▲Technology-Across-the-Curriculum Course.

ACG 2011 - Accounting II

3 Credit Hours
(Spring)

This course covers recording of specific transactions and internal control associated with investments, fixed assets, liabilities, international operations and stockholders' equity. Preparation of the statement of cash flow will be emphasized. The code of professional ethics will be highlighted throughout the course.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

ACG 2071 - Managerial Accounting

3 Credit Hours
(Spring)

This course covers the basic principles of accounting techniques for the preparation of internal reports related to management of the firm and the interpretation of financial data useful in the decision-making process within the economic framework of the entity.

Corequisite(s): ACG 2011 with instructor/department approval.

ACG 2450 - Computer Applications for Accounting

3 Credit Hours
(Spring)

An introductory course in computerized integrated accounting procedures found in the microcomputer environment. Includes application of software designed for general ledger, accounts payable and receivable, financial statement analysis, purchasing and sales order processing, fixed assets, payroll, inventory and departmental accounting.

Prerequisite(s): ACG 2001 is required and knowledge of basic computer and keyboarding skills are strongly

recommended.

▲Technology-Across-the-Curriculum Course.

ACO 1806 - Payroll Accounting

3 Credit Hours
(Spring)

Introduction to the theory, laws and procedures related to payroll activities of a business. Topics include payroll and personnel records, federal payroll laws, payroll operations, computerized payroll systems, and preparation of payroll registers, earnings records, and payroll tax forms.

Prerequisite(s): ACG 2001 is strongly recommended and knowledge of basic computer and keyboarding skills are strongly recommended.

AMH 2010 - American History I

3 Credit Hours ¶
(Fall, Spring, Summer)

American History to 1877; describes the social, political, and economic development of the American people against the geographical background of the New World. Particular emphasis on American intellectual and political thought leading to the emergence of basic American character, ideas and attitudes. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AMH 2020 - American History II

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

American History from 1877, concentrating on industrial growth, the rise of corporate business, big labor, and government organization. Modification of basic American character and ideas as a continual historical process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2010 - American Literature I

3 Credit Hours ¶
(Fall)

A course in American Literature from the pre-Colonial period to the Civil War. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

AML 2020 - American Literature II

3 Credit Hours ¶
(Spring)

A course in American Literature from Civil War to present. This course may be used for Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: AML 2010 is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ANT 2000 - Introduction to Anthropology

3 Credit Hours ❖ ♦
(Offered as needed)

Introduction to the fundamental principles, concepts, methods and theories in Anthropology. Includes a brief introduction to the subdisciplines of anthropology: cultural anthropology, biological anthropology, archaeology, and linguistics. A cross-cultural perspective will be paramount in the study of anthropology.

Prereq/Corequisites: ❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ANT 2100 - Introduction to Archaeology

3 Credit Hours ❖
(Offered as needed)

Introduction to the fundamental principles, methods, and theories in archaeology. Includes a history of the development of archaeology, and examination of the nature of archaeological data and research, an introduction to

archaeological data and analysis, and an examination of approaches to synthesis and interpretation. North and South American archeology is studied, but non-western examples are also studied to enhance an understanding of the development of the discipline in Europe and the Americas.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ANT 2159C - Florida Southeast US Archaeology

3 Credit Hours
(Offered as needed)

Introduction to special topics in anthropology and archaeology. Example: field experience in archaeology, brief introduction to prehistoric native American cultures in Florida and the southeastern United States and field experience excavating a prehistoric site in Okaloosa County.

ARC 1131 - Architectural Presentation

3 Credit Hours
(Summer)

This course introduces basic ideas and presentation techniques directed towards developing design skills, such as drawing, perspective sketching, and graphics using a variety of media to include: pencil, ink, colored pencils, markers, and model building to be used in architectural presentations. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1301C - Design 1.1

4 Credit Hours
(Fall)

The primary foci of this course are the development of two and three-dimensional graphic skills and the ability to think spatially and to manipulate elements in space. Analysis and design exercises are located primarily in abstract two/three dimensional space and deal with topics such as figure/ground relationships, line/plane/mass, the idea of systems, networks, repetition, and the relation of part to the whole. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 1302C - Design 1.2

4 Credit Hours
(Spring)

This course continues the emphasis and topics studied in Design 1.1, with increased expectation with regard to graphic and spatial manipulation ability. Students study exemplary works of architecture and art, beginning the process of developing an understanding of the role history plays in their creative explorations. By the end of the course, site and the human being are part of the design environment. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 1301C.

ARC 2201 - Theory of Architecture

3 Credit Hours
(Fall, Spring)

An introduction to architectural theory, selected contemporary architectural theories and movements, and their evolution and historical basis. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ETD 1102.

ARC 2303A - Design 2.1

6 Credit Hours
(Fall)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

Prerequisite(s): ARC 2201.

ARC 2304 - Design 2.2

6 Credit Hours
(Spring)

Application of two and three-dimensional design principles learned in first-year design, in preparation for whole building design in third year. Small building projects adding programmatic responsibilities to the design agenda. Emphasis on programmatic issues internal to the building such as function, circulation structure, resolution of form, space and place making, and human behavior.

Prerequisite(s): ARC 2303A.

ARC 2472 - Introduction to the Technology of Architecture

4 Credit Hours
(Summer)

This course is the beginning of the technology sequence in the areas of structures, environment technology, and materials and methods of construction. It introduces themes such as the response of buildings to the natural environment, the strength, stiffness, and durability in building materials, and the quantitative method of analysis and design of building assemblies and support systems. It explores the relationship between building technology and the social, aesthetic, environmental and economic aspects of the settings in which buildings are located, and how these factors relate to the process of architectural design. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2501 - Architectural Structures I

3 Credit Hours
(Offered as needed)

The emphasis of the course is on the development of the principles of statics and the application of these principles to the analysis and design of structural systems, primarily column, beam, slab systems, and the truss systems. The course builds on the basic ideas of structural form and material properties developed in Introduction to the Technology of Architecture.

Prerequisite(s): any college level physics or calculus course, and concurrent enrollment in ARC 2472. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARC 2701 - Survey of History of Architecture, Part I

3 Credit Hours
(Offered as needed)

A critical exploration of the history and theory of architecture from pre-history through the end of the 13th century. Examination of the making and intent of significant buildings and sites tracing the developments that have given meaning to the built environment and brought order to the tectonics of architecture. This course is designed as part of an articulation agreement with Florida A&M University; students interested in transferring to another upper division school should consult with an advisor.

ARH 1000 - Art Appreciation

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

This course offers a study in the basic concepts of art, including function, style and structure with emphasis on the interaction of medium and meaning and problems of art criticism. This class does not fulfill the art history requirements for art majors, but compliments the art major's course of study as an elective. This is a Writing-Across-the-Curriculum course requiring selected written assignments. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course is also a Speaking-Across-the-Curriculum course requiring selected speaking assignments. This course qualifies, as well, as having an international and/or diversity focus for Teacher Education programs common prerequisites.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2050 - Art History: Pre-Renaissance

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from prehistoric through Renaissance. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2051 - Art History: Renaissance - 18th Century Neo-Classicism

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in art from Renaissance through Contemporary. Art will be considered in terms of stylistic qualities as well as iconography and historical context. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2060 - Architecture History

3 Credit Hours ❖ † ¶
(Fall, Spring)

Survey of significant contributions in architecture from prehistoric to modern times. Architecture will be considered in terms of stylistic qualities, structural type, and intended usage. Topics will be addressed according to historical content, societal background, and geographical location. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2402 - Art History: Modern Art

3 Credit Hours ❖ † ¶
(Fall, Spring)

Surveys and analyzes the major artistic periods and movements from 18th century Neo-Classicism to present. Required for all Art majors. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ARH 2930 - Art History – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

ART 1201C - Two-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with the principles of organization and the elements of design in a two-dimensional format. This is a foundation course for all of the graphic arts: painting, printmaking, and the two-dimensional crafts. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1203C - Three-Dimensional Design

3 Credit Hours
(Fall, Spring)

An introductory course, both theoretical and applied, dealing with principles of organization and the elements of design in a 3-dimensional format. Various materials, tools, and surfaces are used to explore 3-D form. This is a foundation course. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1300C - Drawing I

3 Credit Hours
(Fall, Spring)

Basic drawing course covering different drawing media, line, form, shape, value and spatial relationships. Drawing problems involving a variety of subject matter will be explored. Emphasis is on value, drawing techniques, spatial relationships between shapes and composition. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1301C - Drawing II

3 Credit Hours
(Fall, Spring)

Continued study of drawing techniques explored in Drawing I. Provides experience with more complex drawing problems. Emphasis is on self-expression, value, color theory, and composition. A variety of subject matter and drawing media will be explored.

Prerequisite(s): ART 1300C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 1750C - Pottery I

3 Credit Hours
(Fall, Spring, Summer)

The students shall be exposed to the production of pottery utilizing all known hand building techniques. Also includes introduction to potter's wheel and basic wheel fundamentals. The first half of course is hand building, the second half is devoted to development of skills on the potter's wheel. Students also learn how to glaze pottery and make glass. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 1751C - Pottery II

3 Credit Hours
(Fall, Spring, Summer)

Continues hand building of Pottery I, but major emphasis is placed upon development skills utilizing the potter's wheel. Additional glazing experimentation is also emphasized.

Prerequisite(s): ART 1750C. Please refer to catalog section regarding audit enrollment.

ART 1905A - Independent Study – Art

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

ART 2330C - Figure Drawing I

3 Credit Hours
(Fall, Spring)

The development of technical skills and self-expression through drawing the figure; course begins with anatomy studies, progresses to conceptualization of human form. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2331C - Figure Drawing II

3 Credit Hours
(Fall, Spring)

This class is a continuation of Figure Drawing I. Emphasis is on composition and self-expression in relation to the human figure. Exploration of media and content will be encouraged.

Prerequisite(s): ART 2330C. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2500C - Painting I

3 Credit Hours
(Fall, Spring)

Course will include design elements, composition and spatial relationships. Emphasis is on color theory, color mixing, and execution thereof within a variety of subject matter. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2501C - Painting II

3 Credit Hours
(Fall, Spring)

This course is a continuation of Painting I ART 2500C with emphasis on further exploration of student’s personal style and original techniques. Further experimentation in abstraction and emotional aspects of form and color are explored and expressed.

Prerequisite(s): ART 2500C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2540C - Water Color I

3 Credit Hours
(Fall, Spring)

An introduction to water media techniques applied to various subject matter through demonstrations and various lab experiences. Open to all students. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2541C - Water Color II

3 Credit Hours
(Fall, Spring)

Allows continued experience in more complex water color technique and subject matter. Emphasis is on composition and individual expression.

Prerequisite(s): ART 2540C. Audit enrollment In studio art classes is permitted on a space-available basis only.

ART 2602C - Digital Imaging I

4 Credit Hours
(Offered as needed)

A digital illustration production course with a strong emphasis on concept development and image making skills. Students will create complex imagery based on manipulations of photographs or traditional drawings and paintings with an industry-standard image editing/manipulation software. Access to an appropriate high quality digital camera is required. It Is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

ART 2603C - Digital Imaging II

4 Credit Hours
(Offered as needed)

A continuing course which expands upon the technical and conceptual foundation laid in Digital Imaging I. Students will explore advanced software techniques and greater challenges of personal or commercial expression in digital media. Access to an appropriate high quality digital camera required.

Prerequisite(s): ART 2602C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

ART 2701C - Sculpture I

3 Credit Hours
(Spring)

An introductory course in the technical and aesthetic consideration of sculptural forms. Includes a wide range of materials and expressions, representing past and present sculptural methods. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2703C - Sculpture II

3 Credit Hours
(Spring)

Allows continued experience in more complex three-dimensional techniques; emphasis on individual projects and conceptual approach.

Prerequisite(s): ART 2701C. Audit enrollment in studio art classes is permitted on a space-available basis only.

ART 2834C - Gallery Practices

3 Credit Hours
(Offered as needed)

The principles of Art Gallery practices and operations. Both theoretical and practical experiences will be obtained through lectures, field trips and class projects.

ART 2930 - Art - Special Topics

3 Credit Hours
(Fall, Spring Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

ART 2955 - Portfolio Development

3 Credit Hours
(Spring)

Development of a working portfolio through studio project aimed at fulfilling the general requirements the average company, university, art school or advertising agency looks for in a portfolio presentation.

Prerequisite(s): ART 1201C, ART 1203C, ART 1300C, ART 1301C.

ASC 2560C - Unmanned Aerial Vehicles & Systems

5 Credit Hours
(Spring)

This course is a survey of unmanned aerial vehicles (UAV) and systems, emphasizing the military and commercial history, growth and applications of UAVs. Course will include basic acquisition, use and operation of UAVs with an emphasis on operations.

Prerequisite(s): ATT 1100

ASC 2564C - Unmanned Vehicle Security

4 Credit Hours
(Spring)

Participants will develop an understanding of the digital operations of an unmanned vehicle. Methods of securing digital information during the upload and downloading functions will be explored.

ASC 2949C - Unmanned Systems Practicum

4 Credit Hours
(Spring)

Practical application in a clinical setting of knowledge acquired in the classroom.

ASL 1140 - American Sign Language I

4 Credit Hours ❖
(Fall, Spring)

Introduces the student to the basic vocabulary and finger spelling of American Sign Language. Emphasis will be on learning to express this language in a simple form and have a basic receptive language competency.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

ASL 1150 - American Sign Language II

4 Credit Hours
(Fall, Spring)

This course increases the student's American Sign Language vocabulary and uses more complex expression of thoughts, ideas, and emotions and increases the receptive and expressive proficiency of the student in both sign and finger spelling.

Prerequisite(s): ASL 1140 or an equivalent course with a grade of "C" or better

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ASL 2160 - American Sign Language III

4 Credit Hours
(Summer)

A conversational course in American Sign Language utilizing skills and vocabulary from American Sign Language I and II and building on these to form more complex expressions in American Sign Language. Impromptu and planned stories, dialogues and skits will be performed. Receptive and expressive finger spelling will be advanced. No voice will be used for the majority of classroom time.

Prerequisite(s): ASL 1150 or an equivalent course with a grade of "C" or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

AST 1002 - Descriptive Astronomy

3 Credit Hours ♦
(Fall, Spring, Summer)

This non-lab one-semester course is designed to meet the general education requirements in physical science for non-science majors and for students in related scientific fields needing a scientific elective. The course includes topics in planetary astronomy, the sun and stellar evolution, galaxies, and cosmology. Also covered are basic physical laws, light, and telescopes. Exercises require only basic math with some very limited algebra.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

AST 1005 - Introduction to Astrobiology

3 Credit Hours
(Spring)

This course will explore the scientific evidence for the possibility, probability, and potential nature of life that might exist beyond the Earth. Contemporary discoveries about current and past conditions suitable for the origin of life on Mars and some of the moons orbiting other planets in our own solar system are reviewed in the context of what we understand about life on Earth. The question of life in other solar systems is also covered. Space travel and problems regarding intelligent extra-terrestrial beings visiting the Earth and intelligent life beyond the Earth but still within our own solar system are also discussed. All this is done in a fashion which integrates the various branches of science required to understand life beyond the Earth: Astronomy, Biology, Chemistry, Geology, and Physics. There are no prerequisites for this course and it may be taught in a team fashion by faculty members from various scientific disciplines.

ATT 1100 - Private Pilot Ground School

3 Credit Hours
(Fall)

An introductory survey of the subjects pertaining to flight; aircraft operation and performance, weather, pilotage, air traffic control and Federal Aviation Regulations in preparation for the Federal Aviation Administration Private Pilot Written examination.

BCN 1230 - Building Construction Materials and Processes

3 Credit Hours
(Fall)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry.

BCN 1272 - Blueprint Reading for Commercial Construction

3 Credit Hours
(Fall, Spring)

A course to familiarize non-drafting students with techniques of blueprint reading and the fundamentals of construction methods that make blueprint reading meaningful.

BCN 1520 - Electrical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with electrical terminology, practices, methods, code requirements and safety and health in construction.

BCN 1567 - Plumbing and Gas Construction Practices

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with Plumbing and Gas code requirements, terminology, methods, practices, processes and safety and health used in building construction.

BCN 2231 - Building Construction Materials and Processes II

3 Credit Hours
(Spring)

Course designed to introduce the student to terminology, methods, procedures, materials, and processes used in the construction industry. The focus of the course will cover Divisions 9 through 16 of the construction industry.

BCN 2560 - Mechanical Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with mechanical trades terminology, methods, practices, code requirements processes, and safety and health criteria in mechanical construction.

BCN 2721 - Construction Management/Planning

3 Credit Hours
(Fall, Spring, Summer)

The course covers project development and organization from pre-construction site investigation to final completion. The course will include the management of project estimates, plans, schedules, operations and safety. The student will become knowledgeable about documents used in the construction industry for bid, contracts, zoning, permits, bonds, loans specifications and drawings. Cost engineering, procurement, value engineering and quality assurance will be covered. Cost management through job cost analysis and purchase order systems will also be covered.

BCT 1763 - Construction Safety and Health

3 Credit Hours
(Fall, Spring, Summer)

A basic course in construction safety and health, covering such topics as: theories of accident causation; workplace hazards; hazard analysis and prevention; accident reporting; OSHA construction standard and safety practices; environmental safety; violence in the workplace; ergonomics; ethics and safety; workers' compensation; and stress on the job.

BCT 2761 - Structural Systems in Construction

3 Credit Hours
(Fall, Spring, Summer)

A course to familiarize students with structural terminology, practices, methods, code requirements and safety, and health criteria in construction.

BCT 2770 - Construction Estimating

3 Credit Hours
(Fall, Spring)

A course in estimating as it relates to the construction industry covering references, estimating methods, take-off organization and presentation; material take-off, cost estimating in heavy construction, mathematical formulas for estimating, quantity take-off from plan review, and computer estimating overview.

Prerequisite(s): BCN 1230, BCN 1272.

BOT 1010C - Botany

4 Credit Hours
(Spring)

This course covers the structure and function of seed plants, basic information on plant metabolism, including photosynthesis and water relations, and a survey of lower plants, algae and fungi. It introduces basic concepts of ecology and plant geography and stresses the importance of plants to humans. Laboratory sessions illustrate concepts from the lecture using specimens, microscope slides and field trips.

BSC 1005 - General Biology

3 Credit Hours ♦
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. (NO LABORATORY — Not for majors in Biology).

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1005C - General College Biology

5 Credit Hours (1 HC)
(Fall, Spring, Summer)

The principles of biology are included. Human Biology is emphasized. Man's effect on the environment is considered wherever appropriate. General biology uses experimental methodology and technique and includes a survey of

bacteria, protist, fungi, plants and animals. The lab content will include a survey of organisms, dissection of plants, invertebrates and vertebrates.

(NWFSC Collegiate High School Students Only)

BSC 1005L - Biology Lab

1 Credit Hour
(Fall, Spring)

Laboratory for General Biology. Experimental methodology and technique. Not recommended for Biology majors.

Prereq/Corequisites: BSC 1005 or equivalent.

BSC 1010C - Principles of Biology I

4 Credit Hours ♦
(Fall, Spring)

A study of the structure and function of the major biological molecules and the organization of these molecules at the subcellular level; of cellular growth including bioenergetics, metabolism and its control, and the movement and incorporation of macromolecules as related to cell expansion and repair; and the study of the control of cellular growth including both genetic and biochemical control mechanisms. Required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): high school biology and chemistry or CHM 1020 and eligibility to enroll in MAC 1105.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1011C - Principles of Biology II

4 Credit Hours
(Fall, Spring)

This course is a continuation of BSC 1010C. It provides an overview of the history of life on Earth, a summary of the concepts of phylogeny and classification, and a survey of organisms with emphasis on plants and animals. Structure, evolution, taxonomy, and ecology of the major phyla will be included. This course is required for Biology, Pre-Med, and most Pre-Professional Science majors.

Prerequisite(s): BSC 1010C.

BSC 1080 - Essentials of Anatomy and Physiology

3 Credit Hours
(Fall, Spring)

This course surveys basic structure and function of the human body with emphasis on terminology and anatomy.

BSC 1085C - Anatomy and Physiology I

4 Credit Hours ♦
(Fall, Spring, Summer)

A study of the human organism to include cells, tissues, skeleton, muscular system and nervous system.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

BSC 1086C - Anatomy and Physiology II

4 Credit Hours
(Fall, Spring, Summer)

A study of the human organism to include the cardiovascular system, the fluid electrolyte balance, and the respiratory, excretory, endocrine, reproductive, gastrointestinal and immune systems.

BSC 1905 - Independent Study – Biology

1 Credit Hour
(Fall, Spring, Summer)

A course designed to (1) allow a student to complete part of a course taken elsewhere and thereby complete general education requirements, (2) to go deeper into special areas of interest.

This course may be taken up to four times for credit.

BSC 2020C - Human Structure and Function

4 Credit Hours
(Fall, Spring, Summer)

A study of the structures and functions of the human body with emphasis on system integrations (homeostasis) and an introduction to system disorders and pathologies.

BUL 2241 - Business Law I

3 Credit Hours
(Fall, Spring)

Introductory course in business law with objective of presenting the law underlying business transactions. Course includes the study of the Law of Contracts, the Law of Bailments, and the Law of Sales based on the Uniform Commercial Code. Recommended for Business degree students.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 2242 - Business Law II

3 Credit Hours
Offered as needed

Course context explores laws relative to negotiable instruments, agency, partnerships, (includes study of Uniform Partnership Act), corporation law, creditors rights, consumer protection and insurance. Based on Uniform Commercial

Code.

Prerequisite(s): BUL 2241 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

CAP 2134C - Database Security

3 Credit Hours
(Spring)

This course is designed to provide the student with an understanding of database security concepts and practices. The objective of the course is to provide hands-on instruction in various database tasks that relate to securing the confidentiality, integrity and availability of information that is stored in a database. The student will be able to perform administrative tasks in different database management systems, as well as manage database user profiles, privileges, and roles. Different database application security models will be explored, as will the security advantages of utilizing virtual private databases. Finally, the process of database auditing will be explored, including auditing methods using various database management systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 2660

▲Technology-Across-the-Curriculum Course.

CAP 2762 - Data Mining

3 Credit Hours
(Offered as needed)

This course offers exploration of data mining methodologies. Topics may include decision tables, decision trees, classification rules, association rules, clustering, statistical modeling, and linear models and will focus on data warehousing, data mining and data drilling.

Prerequisite(s): CGS 2541 or any programming language are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CCJ 1010 - Introduction to Criminology

3 Credit Hours
(Spring)

A study of the nature and causes of crime and delinquency; the development of delinquent and criminal behavior; theory development in criminology, crime rates and trends, victimology and particular crime pattern areas.

CCJ 1020 - Introduction to Criminal Justice

3 Credit Hours
(Fall)

An introduction to the philosophical and historical background of law enforcement and the administration of criminal

justice. Organization and jurisdiction of local, state, and federal law enforcement agencies, court and criminal procedures, career opportunities in the Criminal Justice field are also covered.

CCJ 1941 - Internship – Criminal Justice

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Permission of the instructor

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CCJ 2509 - Introduction to Gangs and Crime

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of street gangs, the social factors, and the general classifications necessary for the law enforcement, corrections, and public safety professional. This course explores the history, membership, activity, current trends, and influence of street gangs. Students will be challenged to define community-based solutions and strategies to combat the criminal activity associated with street gangs.

CCJ 2934 - Special Topics in Criminal Justice

2 Credit Hours
(Fall, Spring, Summer)

This course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester.

*This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

CET 1600C - Networking Fundamentals

3 Credit Hours
(Fall, Spring)

This course introduces the student to the basics of Internetworking technology. This is also the first of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study networks and layers, networking devices, IP addressing, ARP and RARP, media and design, topology, structured cabling, electricity, and electronics and network management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1610C - Routing Protocols and Concepts

3 Credit Hours
(Fall, Spring)

Basic Router terminology and configurations are studied in this course. The student will study router components, router configuration, IOS, TCP/IP, IP addressing, and router protocols. This is one of the four courses designed to prepare a student to take the CISCO Certified Network Associate Exam (CCNA).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: CET 1600C is required.

▲Technology-Across-the-Curriculum Course.

CET 1675C - Introduction to IP Telephony

3 Credit Hours
(Fall)

This course explains how companies are using IP Telephony equipment and software to efficiently upgrade existing telephone systems. In addition, the course will give the student a fundamental understanding of the architecture of voice communication and how signaling, call quality and public switched telephone networks operate in a LAN/WAN networking environment. The use of IP Telephony products will be discussed and how software allows companies to cost-effectively upgrade and eventually replace existing (legacy) telephone systems with more cost-effective and easy-to-use telephone equipment.

Prerequisite(s): CET 1600C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 1854C - Introduction to Wireless Technology

3 Credit Hours
(Fall)

This course teaches key wireless networking topics, including wireless technology and architecture network design, types of wireless networks, and applications. Special focus on technical matters, wireless communication products, wireless networking products, and wireless LANS products. It is recommended that all students have a least a basic knowledge of networking, including protocol, the OSI module, and TCIP/IP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2179C - PC Operating Systems A+

3 Credit Hours
(Fall)

This course is designed to help prepare the student to take the A+ Certification exams by making the student proficient in personal computer operating systems, including Win 2000, Win XP, and Win Vista. Major topics include disk and file management, system configurations, menu driven processing, graphical user interfaces, boot files, disk caching, virtual memory, device drivers, remote assistance, and security essentials and security practices.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2182C - PC Hardware A+

3 Credit Hours
(Spring)

This course is designed to prepare the student to take the A+ Certification exam, by teaching the student basic technical skills needed to understand the function and operation of the major elements of personal computer systems, and how to localize and correct common hardware and software problems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2615C - LAN Switching and Wireless

3 Credit Hours
(Spring)

This course introduces the student to fundamentals of LAN configurations. This is also the third of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study LAN Switching, VLANS, OSPF, EIGRP, VTP, classless routing and Access Lists.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2620C - Accessing the WAN

3 Credit Hours
(Spring)

This course introduces the student to advanced router configurations and network design. This is also the last of four courses designed to prepare a student to take the CISCO Certified Network Associate Exam. The student will study WAN technology and design, PPP, ISDN, Frame Relay, and network management.

Prerequisite(s): CET 2615C isrequired. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2660 - Network Security

3 Credit Hours
(Fall, Spring)

This course provides an in-depth study of network security concepts and techniques. Students examine theoretical concepts that make computer network security unique. This course provides a practical, hands-on approach when examining networking security techniques. Students examine different network strategies, explore the advancement of network implementation, and study timeless problem solving strategies. The course is also intended to assist with preparation for the CompTIA Security+ certification.

Prerequisite(s): Knowledge of networking basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2682C - Cisco Voice over IP (VoIP)

3 Credit Hours
(Spring)

Instruction includes, but is not limited to, Voice over Internet Protocol (VoIP) theory, Voice Gateway configuration in a IP Telephony (IPT) solution, IP Phone configuration, design of VoIP networks and troubleshooting IPT networks. Students will design and configure various VoIP networks using case studies and laboratory equipment.

Prerequisite(s): CET 1675C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2685C - Fundamentals of Network Security

3 Credit Hours
(Spring)

Introduction to network security and overall security processes. This hands-on, skill-based course focuses on the design and implementation of security solutions to reduce the vulnerability of the network, using VPNs, network routers and a firewall. This course helps prepare the student for the CISCO Security Specialist certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2854C - Fundamentals of Wireless LANs

3 Credit Hours
(Offered as needed)

Develop, implement and troubleshoot wireless networks. This hands-on, skill-based course focuses on the design, planning and operation of wireless networks, with an overview of technologies, security, and design best practices. This course helps prepare the student for the CISCO Wireless Certification.

Prerequisite(s): CET 1610C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2880C - Digital Forensics Fundamentals

3 Credit Hours
(Spring)

This course offers a solid foundation to computer forensics investigations: preparing students to acquire and analyze digital evidence. the course covers tools and techniques and explains topics such as file structure, data recovery, e-mail and network investigations, and expert witness testimony. In addition, the student will gain practical knowledge in conducting digital investigations and preserving digital evidence that maybe used in court or corporate inquiries.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2881C - Digital Forensics II

3 Credit Hours
(Summer)

Digital Forensics II builds upon the foundational knowledge learned in digital forensics fundamentals. Students will utilize industry standard tools to conduct examinations of various digital media and document their findings. Devices to be studied include computers (server, desktop, laptop), mobile devices (tablets, cell phones, smart phones, mp3 players, gps), and devices such as dvr's and routers. Emphasis will be placed upon real-world digital forensics scenarios and the investigative thought process. At the conclusion of the class, students will be prepared to take the accessdata certified examiner (ace) examination.

Prerequisite(s): CET 2880C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2891C - Wireless Network Security Certification

3 Credit Hours
(Offered as needed)

This course prepares students to secure wireless networks and protect valuable data from intruders. The following subjects are covered: intrusion tools and techniques, detection systems, WPA/WPA2/802.11i security, enterprise wireless gateways, encryption gateways, secure wireless bridging, and wireless VPN routers. This course prepares students for the compTIA wireless certification exam.

Prerequisite(s): CET 1854C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2892C - Advanced Network Security

3 Credit Hours
(Spring)

This course examines advanced network security topics including, but not limited to, advanced topics in integration of hardware firewalls, advanced topics in Intrusion Detection Systems (IDS), advanced topics in Internet Protocol-security (IPSec), and advanced topics in Virtual Private Networking (VPN) in network security design. Students will implement designs using equipment in a laboratory setting.

Prerequisite(s): CET 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CET 2905 - Independent Study, Computer Engineering

1 Credit Hour
(Offered as needed)

This is a directed study course to provide computer engineering students with individual projects designed to meet specific needs in areas of computer engineering technology for which present course availability is limited.

Prerequisite(s): instructor or departmental chair approval. Knowledge of basic computer and keyboarding skills are strongly recommended.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2940 - Computer Engineering Internship

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2941 - Computer Engineering Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CET 2942 - Computer Engineering Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to four times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CGS 1030 - Computer Basics

3 Credit Hours
(Fall, Spring)

This is an introductory course for basic computer use, including the Internet. It addresses the use of computers for personal, business, and college purposes. It introduces the Windows operating system and Microsoft Office applications, including Word, Excel, and PowerPoint. Hands-on use of a personal computer is required.

Prerequisite(s): none

CGS 1100 - Microcomputer Applications

3 Credit Hours ▲
(Fall, Spring)

This is a hands-on course using computer software including discussion and practical applications of the Windows operating system, computing concepts, Internet, word processing, spreadsheets, database management, presentation software, and various communications topics.

Prerequisite(s): none

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

CGS 1550 - Introduction to World Wide Web

3 Credit Hours
(Fall)

This course provides an introduction to the required hardware, software, procedures, uses and building web pages on the World Wide Web and the Internet.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1570 - Computer Applications for Business

3 Credit Hours
(Fall, Spring)

This is a hands-on course using computer software (word processing, spreadsheet and database) to facilitate the activities involved in the business environment.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 1843 - Introduction to E-Commerce

3 Credit Hours
(Offered as needed)

This course is designed to provide students with an overview of the dynamics of electronic commerce and how it links information technology to business objectives. Course may not transfer to all State University System institutions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2541 - Introduction to Database Concepts

3 Credit Hours
(Fall)

This course will provide an introduction to data modeling and the design and implementation of relational databases and extend the students' understanding of the principles and techniques used in the design and implementation of modern database systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2544 - Advanced Database Concepts

3 Credit Hours
(Summer)

The aim of this course is to explore advanced database concepts including an advanced exploration of data modeling and the design and implementation of relational databases. This course will extend the students' understanding of advanced principles and techniques used in the design and implementation of modern database systems and explore database problems and potential solutions.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CGS 2820 - Web Design

3 Credit Hours
(Fall)

This course introduces programming in techniques associated with web-based languages. The student will learn to create innovative and useful window programs. Topics to be discussed include variables, string handling, loops and arrays, formatting techniques, labels, buttons, menus, loading and saving, error handling, graphics and linking applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CHI 1120 - Mandarin Chinese I

4 Credit Hours ❖
(Fall)

This course focuses on pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language. Designed for students with no previous knowledge of Chinese.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

CHI 1121 - Mandarin Chinese II

4 Credit Hours
(Spring)

This course is a continuation of Mandarin Chinese I with additional vocabulary and grammar. Pronunciation and grammatical structures of Mandarin Chinese, with emphasis upon balanced development of all four skills: listening, speaking, reading and writing. Covers all basic structures of the language and develops a foundation for further study of the language.

Prerequisite(s): CHI 1120 or an equivalent course with a minimum grade of "C".

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

CHM 1020 - Chemical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

Fundamental principles and theories of matter and energy. Atomic theory, periodicity, properties, structure, kinetic molecular theory, bonding, solutions, scientific method, carbon compounds. This course serves as an introduction to chemistry for non-science majors, satisfying the General Education requirement for the A.A. degree; and as a preparatory course for students intending to enter college chemistry.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1032C - General Chemistry for Life Sciences

4 Credit Hours
(Fall, Spring, Summer)

This course is a one-semester introduction to chemistry especially appropriate for those pursuing a degree for a career in an allied health science field, although open to all students. Topics include atomic theory, bonding, nomenclature, gases, acids and bases, stoichiometry, and solutions, with an additional emphasis on reaction rates, equilibria, organic and biochemistry, and organic and biomolecules and their roles and functions in living organisms.

Prerequisite(s): MAT 1033A or appropriate placement test scores.

CHM 1045C - College Chemistry I

4 Credit Hours ♦
(Fall, Spring, Summer)

Quantitative approach to modern theoretical and descriptive chemistry with appropriate development of laboratory technique. Includes symbols, formulas, equations, atomic structure, bonding, states of matter, stoichiometry, thermo-chemistry, solutions, colloids, molecular orbitals, periodicity and properties. A two semester sequence in general chemistry with laboratory exercises and demonstrations. University transfer credit.

Prerequisite(s): MAC 1105 required; high school Chemistry or Physics, CHM 1020 or PHY 1020 advised.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

CHM 1046C - College Chemistry II

4 Credit Hours
(Fall, Spring, Summer)

Continuation of CHM 1045C. Includes kinetics, chemical equilibrium, acids and bases, thermo-dynamics, non-metals and their compounds, electrochemistry, redox, the atmosphere, hydrocarbons, biochemistry, nuclear chemistry, coordination compounds, and qualitative analysis.

Prerequisite(s): CHM 1045C.

CHM 2210C - Organic Chemistry I

4 Credit Hours
(Fall)

This course will present the correlation between structure and physical and chemical properties of organic compounds. The principle types of mechanisms involved in organic reactions will be discussed on aliphatic and aromatic hydrocarbons, alkyl halides, alcohols and ethers. Laboratory exercises illustrate these topics.

Prerequisite(s): CHM 1046C.

CHM 2211C - Organic Chemistry II

4 Credit Hours
(Spring)

In continuation of CHM 2210C - Organic Chemistry I the relationships between functional groups and properties of organic compounds will be discussed. Infrared, NMR, and mass spectroscopy will be used for identification of organic compounds and for structure analysis. The transition state theory is applied to interpret the nucleophilic addition reactions, the carbanion condensation reactions, the interconversions of carbonyl compounds and the nucleophilic acyl substitution of carboxylic acids and their derivatives. Biochemical topics, i.e. lipids, carbohydrates, amino acids and proteins are included.

Prerequisite(s): CHM 2210C.

CIS 1000 - Introduction to Computer Science

3 Credit Hours
(Fall, Spring, Summer)

A broad survey of computing and computer science topics appropriate for computer science, computer engineering, and information systems students. Math placement at the college algebra level strongly advised.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CIS 1940 - Internship in Computer Studies

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
▲Technology-Across-the-Curriculum Course.

CIS 2352C - Ethical Hacking Fundamentals

3 Credit Hours
(Fall)

This course is designed to provide the student with an understanding of the techniques and methodologies of security penetration testing. This course provides hands-on instruction using the various tools and methods that security professionals use to analyze an information system in order to discover vulnerabilities and protect against information loss, cyber-terrorism, and corporate espionage. The student will be introduced to fundamental security testing concepts, gain practical knowledge of computer programming, learn how to properly document a security test, and explore the legal and ethical ramifications of penetration testing. Students will also learn how to apply the appropriate countermeasures in order to reduce the risk that an organization faces.

Prerequisite(s): CTS 1134 is required. Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CJC 2000 - Introduction to Corrections

3 Credit Hours
(Fall)

Theories of punishment and incarceration; the organization of correction programs and institutions, principles of probation and parole, role of parole and probation officers, legal implications; and problems of rehabilitation are covered. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJE 1642C - Introduction to Crime Scene Technology

3 Credit Hours
(Fall, Spring, Summer)

This course explains and discusses the principals and theories in crime scene technology. The course covers specialized collection procedures for biological evidence, weapons, traffic crash evidence, arson evidence, gunshot residue, blood splatter and bodies.

CJE 2300 - Police Administration and Organization

3 Credit Hours
(Fall, Spring, Summer)

This course presents the principles of organization and administration in law enforcement including functions and activities, planning and research, public relations, personnel and training, inspection and control, records and communications and custody.

CJE 2330 - Ethics in Criminal Justice

3 Credit Hours
(Fall, Spring, Summer)

This course is a detailed exploration of ethical issues in Criminal justice with special emphasis on morality and the law, human behavior, and ethical decision making in law enforcement, corrections and the courts.

CJE 2400 - Police and Community Relations

3 Credit Hours
(Fall, Spring, Summer)

A study of the relationship of the Justice Administration agencies to the surrounding community. Examines the effect of social change and the consequences that it produces upon law enforcement, corrections, and the courts.

CJE 2600 - Criminal Investigations

3 Credit Hours
(Offered as needed)

Fundamentals of investigation; duties and responsibilities of the detective; interrogation techniques; search and techniques of protecting the crime scene; collection and preservation of evidence; modus operandi systems; scientific aids and other sources of information; court preparation and case follow-up.

CJJ 1002 - Juvenile Delinquency

3 Credit Hours
(Offered as needed)

A study of the nature and cause of juvenile delinquency, the development of the delinquent and criminal behavior, specific criminal justice subsystem (law enforcement, judicial, corrections) problems dealing with juvenile delinquents from initial contact through final disposition and treatment. This course may be used in transfer to UWF and may be accepted at other upper division schools. Students should consult the department for program planning.

CJL 1100 - Criminal Law

3 Credit Hours
(Fall)

Includes the study of the fundamentals of Criminal Law to include historical background and development, jurisdiction, the criminal act and responsibility, as well as, classification and analysis of Florida Statutes.

CJL 1400 - Criminal Procedure

3 Credit Hours
(Spring)

Includes the study of the fundamentals of constitutional, criminal and civil law; principles, duties and mechanics of criminal procedures in Florida as applied to arrest, search, seizure, and court processing; and a functional analysis of the rules of evidence in court procedures.

CJL 2130 - Criminal Evidence and Procedure

3 Credit Hours
(Fall, Spring, Summer)

This course provides students with an overview of criminal procedure particularly applied to search and seizure and evaluation of evidence.

CJL 2500 - Courts and the Judicial Process

3 Credit Hours
(Fall)

This course is designed to teach the student the major structures and basic legal concepts of the American criminal court system. The students shall learn the components, personnel, and inherent social issues in our present criminal court system.

CLP 1001 - Personal Adjustment

3 Credit Hours
(Fall, Spring, Summer)

Psychology of adjustment, application of psychological theory for problem solving and better mental health. An examination of psychological defense mechanisms and adaptive behavior.

CLP 2140 - Abnormal Psychology

3 Credit Hours
(Fall, Spring, Summer)

A study of the different problems in psychopathology, including anxiety, depression, social deviance, psychosis, schizophrenia, mental retardation and general brain dysfunction of both children and adults, with emphasis on descriptive etiology, known causes, and treatments.

Prerequisite(s): PSY 2012.

COP 1000 - Introduction to Programming Concepts and Logic

3 Credit Hours
(Fall, Spring, Summer)

General survey of programming/problem solving techniques. Includes an introduction to structured programming.

Algorithm development will employ the use of a modern programming language.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2010 - Visual Basic Programming

3 Credit Hours
(Spring)

This course introduces programming in Visual Basic.Net. The student will learn to create innovative and dynamic data structures using Rapid Application Development techniques. Topics to be discussed include: graphical user interface development and object-oriented programming.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2011 - Advanced Applications Programming in Visual Basic

3 Credit Hours
(Summer)

This course introduces the advanced features of Visual Basic.Net. The student will learn to create advanced versions of innovative and useful Windows programs using Rapid Application Development techniques. Topics to be discussed include: basic and advanced graphical user interface development; sequential file processing; advanced object-oriented programming; ActiveX components; advanced database management development including interfacing to external applications and Visual Basic's internal database manager; multimedia, networking; and advanced data structures.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2030 - Programming In Python

3 Credit Hours
(Offered as needed)

An Introduction to Python programming language using microcomputers. Topics include Python basics, use of Python control and data structures, use of Python function, Python 110, and implementation of basic programming tasks.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2176 - Visual Basic ADO.Net

3 Credit Hours
(Offered as needed)

The aim of this course is to provide an advanced level of knowledge in database programming using Visual Basic's ADO.Net, using normalization, object and relational types, modeling, data validation, and structured query language (SQL) in creating database applications.

Prerequisite(s): COP 2010 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2544, COP 2011.

▲Technology-Across-the-Curriculum Course.

COP 2220 - Programming in C

3 Credit Hours
(Spring)

An introduction to C programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2222 - Advanced Programming in C

3 Credit Hours
(Offered as needed)

An advanced exploration of the C programming language using microcomputers.

Prerequisite(s): COP 2220 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2224 - Programming in C++

3 Credit Hours
(Spring)

An introduction to C++ programming using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2228 - Advanced Programming in C++

3 Credit Hours
(Summer)

An advanced exploration of the C++ programming language using microcomputers.

Prerequisite(s): COP 2224 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2360 - Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

An introduction to the C# programming language using microcomputers.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2362 - Advanced Programming in C Sharp (C#)

3 Credit Hours
(Offered as needed)

This hands-on course examines how to utilize advanced features in the .NET Framework using the C# programming language, in order to build sophisticated applications. Students will work with advanced object-oriented programming topics, including inheritance, partial classes and generics.

Prerequisite(s):

COP 2360 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2654 - Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the iPhone SDK platform. It begins with an overview of the Objective-C language and progresses into the details of the UIKit, as well as several other frameworks essential for development on the iPhone and iPad.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2658 - Advanced Programming for Mobile Devices: iOS (iPhone/iPad)

3 Credit Hours
(Offered as needed)

This class teaches the advanced IOS programming topics and provides a broad perspective of the IPhone SDK platform. It begins with an overview of the Objective-C language and progressed into the advanced details of the UIKit, as well as several other frameworks essential for advanced development of the iPhone and iPad.

Prerequisite(s): COP 2654 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2660 - Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches the fundamentals and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devices and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2662 - Advanced Programming for Mobile Devices: Android

3 Credit Hours
(Offered as needed)

This class teaches advanced concepts and provides a broad perspective of the Android development platform. It begins with an overview of the Java language and progresses into the details of the developing for Android-based mobile devises and tablets. The curriculum also covers several other frameworks essential for development on the Android platform.

Prerequisite(s): COP 2660 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2700 - Introduction to SQL

3 Credit Hours
(Spring)

An introduction to SQL and the design and creation of object-oriented databases (using SQL). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL).

Prerequisite(s): COP 1000 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2702 - Introduction to PL-SQL

3 Credit Hours
(Offered as needed)

An introduction to PL-SQL and the design and creation of object-oriented databases (using PL-SQL). Topics include storing, retrieving, updating and displaying data using PL-SQL and Oracle.

Prerequisite(s): COP 1000 and CTS 2440 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2800 - Introduction to Java Programming

3 Credit Hours
(Fall, Spring)

An introduction to programming using the Java language. Students will develop and apply individual programs.

Prerequisite(s): COP 1000 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2805 - Advanced Java Programming

3 Credit Hours
(Spring)

An advanced level programming course using advanced Java techniques.

Prerequisite(s): COP 2800 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

COP 2833 - Databasing for Internet Applications

3 Credit Hours
(Offered as needed)

This course will expose students to basic relational database concepts used in web programming, including structuring data and making queries.

Prerequisite(s): CGS 2541 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CGS 2820

▲Technology-Across-the-Curriculum Course.

COP 2840 - Web-based Programming I

3 Credit Hours
(Spring)

This course is designed to extend the student's understanding of web-based programming techniques, and give them practical experience in the use of a range of technologies for creating e-Commerce applications.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CRW 2001 - Creative Writing I

3 Credit Hours
(Fall, Spring, Summer)

Instruction and practice in writing fiction and poetry. Students will submit a poetry portfolio and complete at least one short story.

CRW 2002 - Creative Writing II

3 Credit Hours
(Fall, Spring, Summer)

Advanced work in poetry and prose modes with emphasis on revision. Students will submit a poetry portfolio and write and revise at least one complete short story. Students will prepare creative work for publisher market.

CRW 2100 - Introduction to Fiction Writing

3 Credit Hours
(Offered as needed)

Practice in writing fiction using various points-of-view. Students will submit completed short stories for workshop. Upon agreement with the instructor, students may elect to develop novel chapters with synopsis. Students will prepare creative work for publisher market.

CRW 2201 - Introduction to Creative Nonfiction

3 Credit Hours
(Offered as needed)

This writing course examines the narrative possibilities of creative nonfiction. We will explore structure, technique, and authorial presence in representative works of established sub-genres, including literary journalism, travel and/or food writing, memoir, the lyric essay and collage.

CRW 2300 - Introduction to Poetry Writing

3 Credit Hours
(Offered as needed)

Practice in writing poetic forms employing poetic techniques. Students will workshop completed poems and submit a portfolio of revised poetry. Students will prepare creative work for publisher market.

CRW 2302 - Intermediate Poetry Writing

3 Credit Hours
(Offered as needed)

This course builds on poetry writing skills developed in CRW 2300. Students will examine styles and techniques of contemporary poets and develop a portfolio of original work with attention to the revision process. Students will prepare creative work for publisher market.

Prerequisite(s): CRW 2300.

CTS 1106 - Fundamentals of UNIX

3 Credit Hours
(Spring)

This course is designed to introduce the UNIX operating system to new users. The student will learn fundamental features of the operating system, including file system navigation, file permissions, editors, command shells, and basic network use. Provides a foundation for more advanced courses in administration and certification.

Prerequisite(s): Knowledge of networking, basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1134 - Network Foundations

3 Credit Hours
(Fall)

This course is designed to introduce students to the terminology and concepts of the network industry, including data communications and network services, OSI Model, topology, network media, connectivity devices and security. This is preparation for the CompTIA Network+ certification and the first course in the MCSE/MCSA certification program.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 1156C - Desktop Support

3 Credit Hours
(Fall)

This course introduces the helpdesk skills to troubleshoot hardware or software operation and application problems for end users on the desktop or client-side, based on the Windows operating system. It is designed to help prepare the student to take the two core exams (70-620 and 70-622) required for certification as an MCITP: Enterprise Support Technician students should have user-level competency with Windows and MS Office.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2104 - Introduction to Windows

3 Credit Hours
(Spring)

An introduction to operating systems in general with emphasis on Windows.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2143C - CompTIA Server+

3 Credit Hours
(Spring)

This course provides advanced concepts in server hardware components and troubleshooting in a non-vendor-specific environment. Introduction to server installation, server storage concepts, administering services, server roles, virtualization, performance monitoring, security, data protection, and maintenance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2163C - Windows 10 Client Operating System

3 Credit Hours
(Spring)

This course addresses the implementation and desktop support needs of the MS client software, including installation, configuration and management of hardware and file systems, user profiles, remote users, and monitoring of resources and performance. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2302C - Windows Active Directory

3 Credit Hours
(Spring)

This course focuses on a Windows server directory service environment, including forest and domain structure, DNS, site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user/group/computer account strategies. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2314C - Network Defense and Countermeasures

3 Credit Hours
(Spring)

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure and implement secure networks. Security topics covered in this course include firewalls, Intrusion Detection Systems (IDS), Virtual Private Networks (VPN) and policy creation using the Windows Operating System (OS), Transmission Control Protocol/Internet Protocol (TCP/IP) packet and signature analysis. The student will get hands-on instruction installing the network defense mechanisms and countermeasure applications. Software will be used for collecting, monitoring and auditing various activities; students will analyze threats and intrusions.

Prerequisite(s): CET 2660 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2321 - UNIX Administration

3 Credit Hours
(Offered as needed)

This course is designed for network administrators in a UNIX operating environment. UNIX operating system concepts, architecture and administration will be explored using Linux. Includes shell programming, database managements, rapid application development, and programming tools such as PERL and C++.

Prerequisite(s): CTS 1134 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): CTS 1106

▲Technology-Across-the-Curriculum Course.

CTS 2346C - Windows Server 2016 Administrator

3 Credit Hours
(Offered as needed)

This course will provide students with the opportunity to develop the skills required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data. Recommended knowledge level: A+, Network +, Security + and Win client operating system. This course prepares the student for the MCITP exam.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2347C - Windows Network Infrastructure 2010

3 Credit Hours
(Spring)

This course addresses the configuration of Windows Server network infrastructure. Topics covered include: routing and remote access, network access protection, network authentication, IPv4 and IPv6 addressing, DHCP, DNS, WINS, DFS, IPSec, and security. Recommended level of knowledge: A+, Network +, Security +. This course prepares the student for the MCTS exam, a core requirement for Windows MCITP.

Prerequisite(s): Knowledge of networking, basic computer, and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2390C - Installing and Configuring Windows Server 2016

3 Credit Hours
(Spring)

This course is the first of a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total collectively cover implementing, managing, maintaining, and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skill set and tasks across the courses, this course primarily covers the initial implementation and configuration of those core services, such as Active Directory Domain Services, networking services, and initial Hyper-V configuration and is also preparation material for, Exam 70-410: Installing and Configuring Windows Server 2016.

Prerequisite(s): CTS 1156C is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2391C - Administering Windows Server 2016

3 Credit Hours
(Spring)

This course is the second in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 infrastructure in an existing enterprise environment. The three courses in total will collectively cover implementing, managing, maintaining and provisioning services and infrastructure in a Windows Server 2016 environment. While there is some cross-over in skills and tasks across the courses, this course will primarily cover the administration tasks necessary to maintain a Windows Server 2016 infrastructure, such as user and group management, network access and data security and is also preparation material for, Exam 70-411: Administering Windows Server 2016.

Prerequisite(s): CTS 2390C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2392C - Configuring Advanced Windows Server 2016

3 Credit Hours
(Summer)

This course is the third in a series of three courses which provide the skills and knowledge necessary to implement a core Windows Server 2016 Infrastructure in an existing enterprise environment. While there is some cross-over in skill sets and tasks across the three courses this course will primarily cover advanced configuration and services tasks necessary to deploy, manage and maintain a Windows Server 2016 infrastructure, such as identity management and identity federation, network load balancing, business continuity and disaster recovery, fault tolerance and rights management. This course is also preparation material, and maps directly to, Exam 70-412: Configuring Advanced Windows Server 2016 Services.

Prerequisite(s): CTS 2391C is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2437 - Administering SQL Server Database

3 Credit Hours
(Offered as needed)

This course provides students with the skills required to install, configure, administer and troubleshoot the client-server database management system of Microsoft SQL Server. This is preparation for the MCP exam, an elective requirement for Windows MCSA/MCSE.

Prerequisite(s): CTS 1134 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2438 - Advanced SQL Server Database

3 Credit Hours
(Offered as needed)

This course provides students with advanced topics required to install, configure, administer and troubleshoot the client-server database management system of Microsoft SQL Server. This course is designed to prepare the student for certification, an elective requirement for the Windows MCSA/MCSE.

Prerequisite(s): CTS 2437 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

CTS 2440 - Introduction to Oracle

3 Credit Hours
(Offered as needed)

An introduction to Oracle and the design and creation of relational databases (using Oracle). Topics include storing, retrieving, updating and displaying data using Structured Query Language (SQL) integrated into Stored Procedures, Functions, Packages and Triggers (PL/SQL Programming).

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

DAA 1100 - Fundamentals of Modern Dance

2 Credit Hours
(Fall, Spring,, Summer)

This beginning dance class serves as an introduction to the art of contemporary dance. It includes instruction and practice in basic modern dance techniques, improvisation, dance forms and brief historical overview.

This course may be taken up to four times for credit.

DAA 1101 - Modern Dance II for Non-Majors

2 Credit Hours
(Fall, Spring, Summer)

This course includes a continued analysis of the modern dance at an intermediate level. Instruction and practice in specific contemporary dance techniques and performance qualities will be stressed.

This course may be taken up to four times for credit.

DAA 1104 - Modern I for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to affect an understanding of the art of the modern dance. It includes a brief history of the dance; instruction and practice in basic dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time. This course maybe taken 4 times for credit.

This course may be taken up to four times for credit.

DAA 1200 - Fundamentals of Ballet

2 Credit Hours
(Fall, Spring, Summer)

This beginning dance course is designed to serve as an introduction to the tradition and discipline of the art of classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, alignment, agility, turnout, control, elevation and sensitivity to line are studied.

This course may be taken up to four times for credit.

DAA 1201 - Ballet II for Non-Majors

2 Credit Hours
(Fall, Spring, Summer)

Intermediate Ballet is designed to train the student in the tradition of the art of the classical ballet beyond the basics.

Continued development of the body as an expressive instrument for ballet movement will be stressed as students reach the proficiency level necessary to perform the more complicated steps of an intermediate class.

This course may be taken up to four times for credit.

DAA 1204 - Ballet I for Majors

2 Credit Hours
(Fall, Spring, Summer)

A beginning dance course designed to serve as an introduction to the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1500 - Jazz I for Non-Majors

1 Credit Hour
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken four times for credit.

DAA 1500A - Beginning Jazz

1 Credit Hour
(Fall, Spring, Summer)

This course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms.

This course may be taken up to four times for credit.

DAA 1504 - Jazz I for Majors

2 Credit Hours
(Fall, Spring, Summer)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 1520 - Tap I

1 Credit Hour
(Fall, Spring)

This course includes instruction in tap dance technique and the introduction of time steps commonly used in musical theater auditions.

This course may be taken up to four times for credit.

DAA 1521 - Tap II

1 Credit Hour
(Fall, Spring)

The Tap II dance class includes a more in-depth history of tap dance, instruction and practice utilizing tap and exploring its various styles.

Prerequisite(s): DAA 1520.

This course may be taken up to four times for credit.

DAA 1580 - Musical Theater Dance I

1 Credit Hour
(Summer)

This beginning course covers the study of musical theater dance techniques and styles as related to a specific performance experience, usually Creative Dramatics. Students must participate in designated rehearsals and performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 1680 - Dance Workshop

1 Credit Hour
(Fall, Spring)

This course includes instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

This course may be taken up to four times for credit.

DAA 1681 - Dance Ensemble

1 Credit Hour
(Fall, Spring)

The student shall participate in the preparation and performance of original dance compositions to include Dance Line and Show Choir performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2105 - Modern II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance class is designed to further the student's understanding of the art of the modern dance. It includes continued study in history of the dance; instruction and practice in intermediate level dance techniques, improvisation, and dance forms. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2205 - Ballet II for Majors

2 Credit Hours
(Fall, Spring, Summer)

This dance course is designed to serve as an further training in the tradition and discipline of the art of the classical ballet. Physical development of the body as an expressive instrument for ballet movement will be stressed as strength, flexibility, balance, agility, alignment, turn-out, control, elevation and sensitivity to line are studied. Performance, research and individual projects comprise the remaining class time.

This course may be taken up to four times for credit.

DAA 2505 - Jazz II for Majors

2 Credit Hours
(Fall, Spring)

The course includes a brief history of the jazz dance and instruction and practice in jazz dance techniques exploring popular dance idioms. Performance, research and individual projects comprise the remaining class time. This course may be taken 4 times for credit.

Prerequisite(s): DAA 1504

DAA 2581 - Musical Theater Dance II

1 Credit Hour
(Summer)

The continued study of Musical Theater dance techniques and styles as related to a specific performance experience, usually Summer Ensemble Workshop. Students must participate in rehearsals and performances.

Prerequisite(s): level of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2610 - Dance Composition

2 Credit Hours
(Fall, Spring)

An introduction and practice in the application of compositional tools encourages the student to explore and compose

dance. By studying the body's movement in time and space the student will improve technical skills, develop improvisation and choreographic skills and enhance overall dance performance. Previous dance experience is helpful.

This course may be taken up to four times for credit.

DAA 2682 - Dance Workshop II

1 Credit Hour
(Fall, Spring)

This course includes continued instruction and participation in dance as required by specific productions, i.e., Theater/Show Choir.

Prerequisite(s): A demonstration of competency determined by audition.

This course may be taken up to four times for credit.

DAA 2683 - Performance Dance, (Repertory and/or Original Choreography)

1 Credit Hour
(Fall, Spring)

This course includes the continuation of study and participation in all rehearsals of selected works of dance repertory and/or original choreography culminating in public performance.

This course may be taken up to four times for credit.

DAN 1750 - Dance Conditioning

1 Credit Hour
(Fall, Spring)

Dance Conditioning is an excellent course in which to begin your dance training. It is designed to improve fundamentals for the beginning/intermediate student through daily practice in floor work, yoga, and Pilates exercises. This movement class will get you ready to meet the challenges of other dance classes by toning, strengthening and preparing the body to move.

This course may be taken up to four times for credit.

DAN 2120 - Dance Appreciation

3 Credit Hours
(Offered as needed)

This course is a study of the development of dance as an art form, as entertainment, and how it relates to the history of cultures and societies, emphasizing the evolution of dance in the specific genres such as ballet, modern dance, jazz dance, and world dance forms. Designed to heighten student awareness of dance as an integral part of society and establish an appreciation of dance's impact on the making of art. This course will give the student a foundation level understanding of dance as an art form and its historical and cultural significance. The major periods of dance history, master choreographers, and their works will be explored through lecture, discussion and media presentation. DAN 2120 is not an activity course.

DEP 2004 - Human Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

A research oriented course in human development, covering the life span of the human being from conception to death. Special emphasis placed upon the interrelationships of the stages of development of the normal person.

DEP 2100 - Child Growth and Development

3 Credit Hours
(Fall, Spring, Summer)

This course covers the growth and development of the child from conception through age five, including the physical, social, emotional and mental development of the young child, influence of environment, and principles and theories of development.

DSC 1002 - Domestic and International Terrorism

3 Credit Hours
(Offered as needed)

This course is designed to assist students in recognizing and understanding the elements and objectives of terrorism and 4th Generation Warfare and how they affect public safety planning and response operations.

DSC 1004 - Introduction to NRF and NIMS

3 Credit Hours
(Offered as needed)

Designed to inform emergency responders and planners of the key elements in the National Response Framework (NRF) and the National Incident Management System (NIMS) and their relationship to planning and response operations. The curriculum includes classroom exercises.

DSC 1222 - Psychological Management of Disaster Victims

3 Credit Hours
(Offered as needed)

This course introduces students to a general overview of terrorism and the potential psychological effect of terrorist events on victims.

DSC 1552 - Critical Infrastructure Protection

3 Credit Hours
(Offered as needed)

This course introduces participants to the Critical Infrastructure Protection (CIP) process to secure the effective protection of the people, physical entities, and cyber systems that are critical. The CIP course will guide leaders in the systematic protection of critical infrastructures. More basically, the course will introduce decision sequence that assists leaders and future leaders in ultimately determining exactly what really needs protection as well as when. The

course will introduce a time-efficient and resource-restrained practice that ensures the protection of only those infrastructures upon which survivability, continuity of operations, and mission success depend.

DSC 1562 - Homeland Security Threat Strategy

3 Credit Hours
(Offered as needed)

This course addresses problems of terrorism from a criminal justice perspective. It is designed to provide students with an understanding of the major issues associated with responding to terrorism in a democratic society. The course focuses on the threat of terrorism to the United States and will review specific strategies to deter terrorist threats to the U.S. The course will assess the relative effectiveness of anti-terrorist activities.

DSC 1631 - Planning Considerations for Terror Prevention

3 Credit Hours
(Offered as needed)

This course introduces participants to various aspects of planning for potential terrorist activity. The student will be introduced to basic principles of emergency management, communications, security threats, and the effects these operations may have on personnel. The student will learn techniques for evaluating their own jurisdiction's vulnerability against terrorist attacks. Students will gain knowledge of the roles and responsibilities of local agencies during terrorism responses. The course introduces participants to various aspects of emergency management of terrorist activity.

DSC 1751 - Homeland Security Policy and Law

3 Credit Hours
(Offered as needed)

This course introduces participants to the major debates about balancing democratic freedoms with security from the Patriot Act to Supreme Court decisions on detention powers. The course provides insight into legal strategies necessary to confront ongoing national security threats. The course examines laws designed to preserve both our security and our democratic way of life.

DSC 2055 - Issues in Disaster Response

1 Credit Hour
(Offered as needed)

This course serves as an introduction to disaster response and mitigation for the first responder. Students will be introduced to legislation that has had a major impact on disaster and incident response, the role of local, tribal, state and federal government response to incident and disaster declarations and a brief introduction to the National Incident Management System, National Response Plan and the Incident Management System.

DSC 2056 - Disaster Response Operations

3 Credit Hours
(Offered as needed)

This course examines the response protocol, logistics, responsibilities, interagency support, and concepts of front end planning involved in preparation for a catastrophic event. Students will be introduced to the development of an

emergency response plan that will include concepts such as lookout, awareness, communications, escape, safety (laces), training, and various agency relationships.

DSC 2900 - Development of Unmanned Vehicle Applications

3 Credit Hours
(Fall, Spring, Summer)

Students complete a project that demonstrates excellence by applying the knowledge of unmanned drones gained from the public safety core courses. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

ECO 2013 - Economics I

3 Credit Hours ♦
(Fall, Spring)

This course covers macroeconomics, its basic concepts and principles, national income accounting; fiscal and monetary policy and application, and growth economics. Basic math skills are required.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ECO 2023 - Economics II

3 Credit Hours
(Spring)

This course covers microeconomics, including economic structures, price theory, factor markets, and general equilibrium. It also includes the economics of information, externalities, and other current national and international issues.

Prerequisite(s): ECO 2013 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

EDF 1005 - Introduction to the Teaching Profession

3 Credit Hours
(Fall, Spring)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. An additional fingerprinting cost may be associated with this course. This course is intended for those students planning to enter a bachelor degree program leading to teacher certification (BS Elementary Education, BS Middle Grades Math, or BS Middle Grades General Science). If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

Prerequisite(s): ENC 1101 AND (MAC 1105 or STA 2023)

EDF 1005A - Introduction to the Teaching Profession - A

3 Credit Hours
(Fall, Spring, Summer)

A study of the history, philosophy and social context of education. The course will help the student think critically about the process of education and his/her role as an educator. During an eighteen hour field experience, the student will observe and participate in the educational settings of local schools. This course is intended for those students that are not planning to enter a degree program leading to teacher certification. An additional fingerprinting cost may be associated with this course. If used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program, this course requires a minimum grade of "C."

EDF 1006 - Field Experience in Education

1 Credit Hour
(Offered as needed)

This Educational Field Experience course allows students to work in an educational setting for a semester to meet requirements for admission to the BSE program. This course requires a minimum grade of "C". Current background check (fingerprints) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): permission of department chair.

EDF 1006A - Field Experience in Education

2 Credit Hours
(Offered as needed)

This Educational Field Experience course allows students to work in an educational setting for a semester to meet requirements for admission to the BSE program. This course requires a minimum grade of "C". Current background check (fingerprints) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): permission of department director.

EDF 2085 - Introduction to Diversity for Educators

3 Credit Hours
(Fall, Spring)

This course will provide the student with the opportunity to explore personal values and attitudes toward cultural diversity. Designed for the prospective educator, the theoretical component will examine the issues of teaching in culturally diverse classrooms. An eighteen-hour field experience and examination of educational materials will enhance the student's understanding of multiculturalism. An additional fingerprinting cost may be associated with this course. This course requires a minimum grade of "C" if used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEC 1001 - Introduction to Early Childhood Education

3 Credit Hours
(Fall)

Study of principles and practices of programs for young children; current research in early childhood education, role of the teacher, and selection and use of equipment and materials for groups of young children.

EEC 1002 - Early Childhood Program Administration

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with management and administrative skills related to child care services. Instruction includes: director responsibilities; staff selection, supervision, and evaluation; planning for budget, nutritional services, facility maintenance, health, and safety; and marketing techniques.

EEC 1201 - Infants and Toddlers

3 Credit Hours
(Fall, Spring, Summer)

This course provides the student with information pertinent to the care of infants and toddlers. Special attention is given to selection of developmentally appropriate curriculum. Course work satisfies the Child Development Associate competency standards for Infant/Toddler.

EEC 1309 - Early Childhood Education Foundations

3 Credit Hours
(Fall, Summer, Spring)

Study of the techniques of using language arts, science, art, social studies, music, mathematics, and physical activities with young children.

EEC 1401 - The Family In Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

This course is comprehensive in scope, emphasizing skills and concepts of parenting which include: adjustment to parental roles; parent-child communication, care, growth, and development of children; cultivating strong families; special concerns; alternative family structures; educational institutions working effectively with parents; and agencies and legislation affecting children and parents.

EEC 1601 - Assessment in Early Childhood Education

3 Credit Hours
(Fall, Spring)

Designed to increase objectivity and proficiency in observing and interpreting children's behavior in addition to increase awareness of normative patterns of children from birth through five years of age. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

EEC 1750 - Guidance for Young Children

3 Credit Hours
(Fall, Spring Summer)

A study of principles, methods, guidance and discipline techniques used to promote positive social development in young children; influence of environment and developmental level of child on social behavior.

EEC 1949 - Internship, Early Childhood Education

3 Credit Hours
(Fall, Spring, Summer)

On-the-job training (OJT) in the Associate in Science degree program in which the student is enrolled. The student is under the supervision, at work, of a qualified supervisor appointed by the respective agency, who works with the NWFSC instructor regarding student's OJT objectives based on student's goals and prior training. The supervisor will rate the student's performance, knowledge, comprehension, dependability, initiative, cooperativeness based on OJT performance. NWFSC instructor will evaluate student OJT experience in consultation with agency supervisor regarding OJT performance and project paper on approved project submitted two weeks prior to close of semester. This course may be repeated four times for a total of 12 semester hours. Current background check (fingerprinting) as required by the Early Childhood program in which the field experience will take place is required for this course.

Prereq/Corequisites: EEC 1309 or EEC 1201.

EEC 2220 - Language and Literacy Instruction In Early Childhood Education

3 Credit Hours
(Spring)

Study of the principles, methods, and materials used to assist young children acquire basic skills to use language effectively and competently; evaluation and development of appropriate teaching materials to use with young children.

Prerequisite(s): EEC 1309

EEC 2222 - Math and Science Instruction In Early Childhood Education

3 Credit Hours
(Spring and as needed)

Study of the basic concepts, methods, and materials of mathematics and science appropriate to the education of young children. Identification of the role of staff members in the center for the education of young children. Assignment with young children in community agencies.

Prerequisite(s): EEC 1309.

EEC 2732 - Child Nutrition, Health and Safety

3 Credit Hours
(Fall, Spring, Summer)

Methods of meeting physical needs of young children through nutrition and good health practices. Recognition of childhood diseases and care of the handicapped child.

EEL 2603C - Robotics-Mechanics and Controls

3 Credit Hours
(Fall)

This course introduces the student to robotics. Instructional topics will include robot classifications, applications, Input/Output (I/O) and sensor interfacing.

Prerequisite(s): ETS 1542C

EET 1015C - Electricity/Electronics I, DC Circuits

3 Credit Hours
(Fall, Spring)

This is the first course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in DC series, parallel, and series/parallel circuits containing common circuit elements with single and multiple sources. Students are introduced to Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in DC circuit analysis. Students will learn how to use a digital multimeter to trouble shoot and analysis DC circuits.

Prerequisite(s): EET 1084C

EET 1025C - Electricity/Electronics II, AC Circuits

3 Credit Hours
(Fall, Spring)

This is the second course required for Electronics Aide certificate. This course introduces the theories, concepts, and relationships of voltage, current, and power in AC series, parallel, and series/parallel circuits containing common circuit elements with single and 3-phase sources. Students will apply Ohm's Law, Kirchoff's voltage and current Laws, Thieving's, Norton's, super-position, and maximum transfer of power theorems and their uses in AC circuit analysis. Included will be the use of a multimeter and oscilloscope for experimentation with and trouble shooting AC circuits.

Prerequisite(s): EET 1015C

EET 1084C - Introduction to Electronics

3 Credit Hours
(Fall, Spring)

This course introduces the fundamentals, terminology, and applications used in the electronics industry. The topic coverage will include circuit theory principles, electronic components, transistor usage, amplifiers, power supplies, digital logic techniques, and electronic instruments. The course will also include some basic laboratory exercises to strengthen the topic coverage as it pertains to measurement involving both analog and digital circuits.

EET 1141C - Solid State Electronics

3 Credit Hours
(Fall, Spring)

This is the third course required for Electronics Aide certificate. This course introduces the student to the concept, components, and uses of solid state electronics. Topics include semiconductor devices; thyristors and diodes, transistors, amplifiers, power supplies, oscillators, and optoelectronics. The use of capacitors and inductors in solid state electronics will be also covered. The design, set-up, and troubleshooting solid state circuits and devices using various power supplies and function generators will be dispersed throughout the class.

Prerequisite(s): EET 1025C

EET 1180C - Industrial Electronic Troubleshooting

3 Credit Hours
(Fall, Spring)

This course covers troubleshooting procedures for a variety of electronic equipment and circuits common to industrial applications. The student will develop and implement trouble shooting protocols and plans, equipment monitoring plans, a preventive maintenance plan, and select appropriate test and monitoring equipment. Safety in an industrial setting will be stressed and reinforced through a series of lab exercises throughout the course.

Prerequisite(s): EET 1084C

EET 2155C - Linear Integrated Circuits

3 Credit Hours
(Fall, Spring)

This course covers the fundamentals and applications of linear integrated circuits and operational amplifiers. The course covers includes inverting and non-inverting amplifiers, comparators, signal generators, differential and instrumentation amplifiers, operational amplifier specifications, active filters, modulator-demodulator integrated circuits, timers, analog to digital converters (ADC), and digital to analog converters (DAC) and measurement and analysis of linear circuits and devices.

Prerequisite(s): EET 1015C, EET 1025C

EEX 2010 - Introduction to Exceptional Children

3 Credit Hours
(Offered as needed)

Study of incidence, nature, etiology and services available in connection with exceptional children including: hearing and speech problems, learning disabilities, mental retardation, blind, physically handicapped, gifted, emotional conflicts, and parents of exceptional children.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EGN 1111C - Engineering Graphics

3 Credit Hours
(Fall, Spring, Summer)

Covers the use of instruments, lettering practice; geometric construction; multiview projection and conventions, auxiliary views, section views, axonometric and oblique projections, rotation, patterns and development, and methods of reproduction.

Prerequisite(s): ETD 1102 or equivalent: prerequisite only applies to Architectural Drafting and Design students.

EGN 1130C - Descriptive Geometry

3 Credit Hours
(Fall, Spring, Summer)

Covers basic principles of orthographic projection, auxiliary views and rotation as they apply to points, lines and planes in space; addition of coplanar and non-coplanar vectors; intersections and developments; and selected abstract, exponometric and oblique projection, and practical problems.

Prerequisite(s): EGN 1111C or equivalent.

EME 2040 - Introduction to Technology for Educators

3 Credit Hours
(Fall, Spring Summer)

This course will develop competencies necessary to integrate technology into classroom instruction. Students will survey a variety of instructional technology materials, software, and systems, as well as learn to use these in the classroom environment. This course requires a minimum grade of “C” if used to meet state prerequisite requirements for entry into a Bachelor of Teacher Education program.

EMS 1119C - Emergency Medical Technician

6 Credit Hours
(Offered as needed)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1401L.

EMS 1335 - Emergency Vehicle Operators Course

1 Credit Hour
(Offered as needed)

Students receive basic education and information on the safe and effective operation of emergency vehicles.

Prerequisite(s): permission of the EMS Program Director.

EMS 1337 - Defensive Tactics

1 Credit Hour
(Offered as needed)

Designed to provide EMS personnel with fundamental knowledge of the recognition of aggressive/violent behavior, and use of appropriate verbal and physical skills to control aggressive behavior in the course of providing emergency care.

Prerequisite(s): admission to the Paramedic program or permission of instructor.

EMS 1401L - EMT Lab

6 Credit Hours
(Offered as needed)

An integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): permission of the EMS Director and AHA CPR for the Healthcare Provider

Corequisite(s): EMS 1119C.

EMS 2231C - Paramedic Processes I

5 Credit Hours
(Fall)

First course in the sequence necessary for Paramedic program completion. Designed to integrate concepts and clinical skills learned at the EMT level with advanced life support concepts and skills. Emphasis on patient assessment, pulmonary anatomy and physiology, advanced airway management, pathophysiology and clinical management of shock, medical emergencies and traumatic injuries. Course is consistent with most current Department of Transportation (DOT) curriculum.

Prerequisite(s): admission to the Paramedic program.

EMS 2232C - Paramedic Processes II

5 Credit Hours
(Spring)

Second course in the sequence necessary for Paramedic program completion. Integrates and reinforces concepts and clinical skills learned in Paramedic Processes I, with emphasis on pharmacology, cardiology and Advanced Cardiac Life Support (ACLS) skills. Other topics include assessment and management of OB/GYN emergencies, psychiatric emergencies, pediatric emergencies, musculoskeletal injuries and mass casualty situations. Consistent with the most current DOT curriculum.

Corequisite(s): EMS 2436L.

EMS 2233 - Paramedic Processes III

2 Credit Hours
(Spring)

The final course necessary for Paramedic program completion. Designed to prepare the student for both Florida State Board and National Registry examinations. Emphasizes the integration of paramedic knowledge, attitudes and behaviors. Course consistent with the most current DOT curriculum.

Corequisite(s): EMS 2425L.

EMS 2342 - Advanced Extrication

1 Credit Hour
(Offered as needed)

Focus is on advanced principles of gaining access to and disentanglement of victims of vehicular crashes. Emphasis is placed on victim and rescuer safety. Actual use of available rescue tools is included. Packaging of patients to protect against possible spinal injury is demonstrated and assessed. The course takes place with a mock scene and "junk" cars are used for experience with rescue tools.

EMS 2425L - Paramedic Externship

4 Credit Hours
(Spring)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

Corequisite(s): EMS 2233.

EMS 2435L - Paramedic Lab I

5 Credit Hours
(Fall)

The clinical and skills laboratory companion course to EMS 2231C. Designed to provide instruction in advanced paramedic skills and the opportunity to apply these skills in the clinical setting. By state rule, the instructor-to-students ratio will not exceed six students to one instructor.

Prerequisite(s): admission to the Paramedic program

Corequisite(s): EMS 2231C.

EMS 2436L - Paramedic Lab II

5 Credit Hours
(Spring)

This course is the clinical companion course to EMS 2232C, Paramedic Processes II. It is designed to provide instruction in the advanced paramedic skills and the opportunity to apply them in the clinical setting. By state rule, the instructor-to-student ratio will not exceed six students to one instructor.

Prerequisite(s): EMS 2435L

Corequisite(s): EMS 2232C.

EMS 2438C - Advanced Clinical Internship

2 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): EMS 2232C, EMS 2436L and permission of the instructor

EMS 2526 - Twelve-Lead EKG Interpretation

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of twelve-lead electrocardiogram (EKG) interpretation. Emphasis on scenario-based and case-based learning that reinforces the concept that 12-lead EKG technology is the best tool for visualization of the surfaces of the heart, identification of sites of ischemia, injury and infarction, as well as various intricate conduction abnormalities.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2552 - Advanced Cardiac Life Support (ACLS)

1 Credit Hour
(Offered as needed)

An intense overview of the guidelines for emergency cardiac care and cardiac arrest management as published by the American Heart Association. Students must successfully pass a written examination and a skills proficiency performance examination to receive the "ACLC Provider" and successfully pass the course.

Prerequisite(s): EMT certificate and CPR for Health Care Providers certification.

EMS 2553 - Pediatric Advanced Life Support (PALS)

1 Credit Hour
(Offered as needed)

Designed for the EMS student. Fundamentals of recognizing infants and children who are at risk for cardiopulmonary arrest, including the strategies that are needed to prevent cardiopulmonary arrest in infants and children and the cognitive and psychomotor skills needed to resuscitate and stabilize infants and children in respiratory failure, shock or cardiopulmonary arrest.

Prerequisite(s): EMT certificate or permission of the instructor.

EMS 2555 - International Trauma Life Support (ITLS)

1 Credit Hour
(Offered as needed)

Fundamentals of managing traumatic injuries at the basic and advanced levels in accordance with the national Basic Trauma Life Support committee. The recognition and treatment of specific traumatic injuries such as pneumothorax, closed head injury, hemothorax, compensated and decompensated shock, fractures, uncontrolled bleeding, internal injuries of the abdomen and thorax. Emphasis is on rapid assessment, management and transport with discussion on mechanism of injury and kinematics of trauma.

Prerequisite(s): EMT certification or permission from the instructor.

EMS 2940 - Internship: Emergency Medical Services

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

ENC 1101 - English Composition I

3 Credit Hours ♦ ▲ ¶
(Fall, Spring, Summer)

Instruction and intensive practice in expository and argumentative writing including a documented paper. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

▲ Technology-Across-the-Curriculum Course

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 1101L - English Composition I Lab

1 Credit Hour
(Fall, Spring, Summer)

An instructor directed writing workshop designed to improve student's opportunity for success in ENC1101. Students will strengthen writing and grammar skills necessary to master the topics and concepts covered in ENC1101. Areas of focus include, but are not limited to, the following: expository and argumentative writing; appropriate diction; conventions of Standard American English grammar, punctuation, sentence structure; conventions of MLA.

Prerequisite(s): ENC0025 and REA0017 or equivalent with a "C" or better grade, or a score of 100-116 on the PERT, or on an elective basis with a score of 103 or higher on the PERT.

Corequisite(s): ENC 1101

ENC 1102 - English Composition II

3 Credit Hours ¶
(Fall, Spring, Summer)

Interpretative and critical reading of fiction, drama, and poetry. The student will write analytic discourse and research papers as part of the essay process. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of ENC 1101 or an equivalent course with a grade of "C" or better.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENC 2210 - Technical Report Writing

3 Credit Hours
(Spring)

The course covers the fundamentals of technical report writing, mechanics, and style. Various types of reports are prepared and evaluated. The course also includes reading and analysis of technical literature as well as oral reporting.

Prerequisite(s): passing score on placement test.

ENG 1001 - Research Papers

1 Credit Hour
(Fall, Spring, Summer)

A learn-by-doing course in the methods of conducting library research and writing a documented paper. Students will work on self-selected subjects under the supervision and guidance of the instructor in a tutorial relationship. For successful completion, each student will write a documented paper in accordance with a standard system. This course may be taken four times for credit.

This course may be used as a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. Students may use this course to satisfy deficiency in the Gordon Rule writing requirement, but it may not be used in lieu of traditional Gordon Rule courses, such as ENC 1101.

ENL 2012A - English Literature I

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Old English period, Beowulf, through the late Eighteenth century, the Age of Enlightenment, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENL 2022 - English Literature II

3 Credit Hours ¶
(Offered as needed)

A study of English literature from the Romantics through the modern era, focusing on major works and their authors with an emphasis upon the literature as a significant reflection of and contribution to the political, cultural, social, religious, and economic milieu of each age. This course may be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101. (Note: ENL 2012A is not a prerequisite for this course)

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ENT 2931 - Selected Studies in Entrepreneurship

1 Credit Hour
(Spring)

In this course, topics of current interest are presented in group instruction.

ESC 1000 - Earth Science

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides an introduction to materials, processes, and interactions of Earth's global environments – the lithosphere (solid earth), hydrosphere (water earth), atmosphere (gaseous earth), and biosphere (living earth). It also includes a survey of sciences pertaining to the Earth, including basic astronomy, meteorology, oceanography, and geology.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

ESC 1000L - Earth Science Lab

1 Credit Hour
(Fall, Spring, Summer)

Laboratory experiences pertaining to the physical environment: observation, measurement, data analysis, mapping, map interpretation, and properties of earth materials. This is an optional course serving students who transfer to universities which require a laboratory course to satisfy the General Education requirement in Physical Science.

ETD 1102 - Introduction to Technical Drawing

3 Credit Hours
(Spring, Summer, Fall)

A course in the fundamental principles of the graphic language (the language of industry) and is developed for students without previous mechanical drawing experience. Topics include: use and care of instruments, lettering, geometric construction, multiview projection, sketching techniques, inking, and methods of reproduction.

ETD 1112 - Mechanical Drafting I

4 Credit Hours
(Offered as needed)

The second of a sequence of courses in drafting which includes basic use of instruments, freehand lettering, geometric construction, orthographic projection, sections and conventional revolutions, dimensioning, inking, mechanical lettering, methods of reproduction, and developing computer-aided drafting skills.

Prerequisite(s): ETD 1102 and ETD 1320C or equivalent

ETD 1217 - Fundamentals of Dimensioning and Tolerancing

4 Credit Hours
(Fall, Spring)

A course designed to help students develop the basic fundamentals of dimensioning and tolerancing. Topics include:

dimensioning systems such as; metric, decimal, fractional-inch, foot and inch, tolerancing methods, limits and tolerances, tolerancing accumulation, dimensioning practices, and standards fits.

ETD 1320C - AutoCAD I

3 Credit Hours
(Fall, Spring, Summer)

A basic course on the use of AutoCAD Software to include: introduction to AutoCAD, drawing commands, display and inquiry commands, modify commands, dimensioning and annotation, data exchange and output files.

▲Technology-Across-the-Curriculum Course.

ETD 1340C - AutoCAD II

3 Credit Hours
(Fall, Spring, Summer)

The second course in a series designed to develop skill and proficiency in the use of AutoCAD software to include: additional drawing commands, editing commands, modify commands, advanced display and inquiry commands, advanced dimensioning and annotation, advanced layering, block, attributes and X-Ref, paper space, UCS, data exchange and output files.

Prerequisite(s): ETD 1320C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1355C - AutoCAD 3-D Modeling I

3 Credit Hours
(Fall, Spring)

A basic course in mechanical design using basic computer geometry techniques. Topics will include: orthographic projections, space relationships of points, lines, planes and revolution of objects. Additional coverage will include principles of surface generation, intersections, wire modeling, and solid modeling techniques.

Prerequisite(s): ETD 1340C or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 1801C - Technical Illustration

3 Credit Hours
(Fall)

The purpose of this course is to help students develop the skills, knowledge, and attitudes necessary to be job entry-level qualified as technical illustrators.

Prerequisite(s): ETD 1112 or EGN 1130C, and ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2150 - Industrial Print Reading

3 Credit Hours
(Fall, Spring, Summer)

The beginning level aspects of reading industrial prints such as drawing notes, title blocks, revision blocks, legends, schedules, multiviews, and parts list.

ETD 2218 - Geometric Dimensioning and Tolerancing

4 Credit Hours
(Fall, Summer)

An introductory course in geometric dimensioning and tolerancing using the geometric method nationally accepted according to ASMEY 14.5M. Topics covered include: definition and terms, symbols, datum referencing, locational tolerancing, form tolerancing, profile tolerancing, orientation and runout tolerancing, and math for positional tolerancing.

Prerequisite(s): ETD 1217 or equivalent.

ETD 2350C - AutoCAD III

3 Credit Hours
(Fall, Spring, Summer)

An advanced course designed to help students develop proficiency in the area of computer aided drafting and systems drafting. Topics covered include: transfer drawings, digitized drawings, explanatory drawings, multiview projections, exploded assemblies, pictorial drawings, auxiliary views, sections, details, geometric dimensioning and tolerancing, and CADD concepts.

Prerequisite(s): ETD 1340C.

▲Technology-Across-the-Curriculum Course.

ETD 2357C - Inventor I

3 Credit Hours
(Spring)

A basic course in Parametric Solid Design using AutoDesk Inventor Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2358C - Inventor II

3 Credit Hours
(Summer)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using Inventor Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools,

advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2357C.

▲Technology-Across-the-Curriculum Course.

ETD 2364C - SolidWorks I

3 Credit Hours
(Fall)

A basic course in Parametric Solid Design using SolidWorks Software. Topics include: basic concepts of parametric part sketching 3D part creation, Revolve, Sweep and Lofted features, shell and coil, surface creation, sheet metal and orthographic drawing production.

▲Technology-Across-the-Curriculum Course.

ETD 2368C - SolidWorks II

3 Credit Hours
(Spring)

The second course in a series designed to develop skill and proficiency in Parametric Solid Design, using SolidWorks Software. Topics include: sheet metal modeling, assembly concepts, assembly modeling approach and tools, advanced constraints, motion simulation, adaptive technology and drawing presentation.

Prerequisite(s): ETD 2364C or higher or equivalent.

▲Technology-Across-the-Curriculum Course.

ETD 2371C - 3D Printing I

3 Credit Hours
(Fall, Spring, Summer)

This course will develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students select a field of specialization to explore methods and materials in a number of options in industrial environment with the use of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2364C or ETD 1355C or ETD 2357C or permission of instructor.

ETD 2372C - 3D Printing II

3 Credit Hours
(Fall, Spring, Summer)

The student will continue to develop elements of creative thinking and problem solving used in the design process, including the techniques and methods used to construct prototypes and models. In the project aspect of this course, the students expand their knowledge in the methods and materials and of computer simulation, modeling, and rapid prototyping.

Prerequisite(s): ETD 2371C or permission of the instructor.

ETD 2377C - 3D Studio Max I

3 Credit Hours
(Offered as needed)

Course is designed to use 3D Studio in rendering, and animation as a dynamic visualization tool for AutoCAD design images. Upon completion of this course, the user will be able to navigate through the modules of the program, model simple projects, set up scenes for rendering and animation, assign materials to objects, and define simple motion paths, input and output techniques.

Prerequisite(s): ETD 1355C or equivalent.

ETD 2731 - Mechanical Drafting II

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 1112 or equivalent.

ETD 2735 - Mechanical Drafting III

4 Credit Hours
(Offered as needed)

A course that continues and completes the student's study of the fundamentals intrinsic to all types of drafting. Topics covered include: isometric, diametric, trimetric, oblique, and perspective projection, descriptive geometry, auxiliary views, related mathematics, and precision dimensioning developing computer-aided drafting skills.

Prerequisite(s): ETD 2218 and ETD 2731 or equivalent.

ETD 2802C - Technical Illustration II

3 Credit Hours
(Spring)

The purpose of this course is to help students develop advanced skills, knowledge, and attitudes necessary as technical illustrators, to include oblique, and axiometric projections, perspective and exploded pictorial drawings, and related techniques.

Prerequisite(s): ETD 1340C or equivalent.

ETD 2905 - Independent Study – Drafting

1 Credit Hour
(Fall, Spring, Summer)

Practical treatment of special geometry, graphics, and design with emphasis on individual work projects utilizing such graphical techniques as orthographic projection, perspective drawing, auxiliary views, topographic drawing, and graphing.

Prerequisite(s): EGN 1111C and ETD 1112 or permission of instructor.

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.
* This course may be taken up to four times for credit.

ETG 1941 - Internship

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): permission of the instructor

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

ETI 1420 - Properties of Materials and Processes

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with an introduction to the basic properties of materials, principles and processes in the metal working, tools and machinery involved in the manufacture of metals. This course covers non-chip producing and chip producing manufacturing processes.

ETI 1710 - Occupational Safety

3 Credit Hours
(Spring, Summer, Fall)

A basic course in occupational safety and health covering such topics as: theories of accident causation, workplace hazards, hazard analysis and prevention, accident reporting, OSHA, ergonomics, product safety, workers' compensation, and stress on the job.

ETI 2110 - Total Quality Tools

3 Credit Hours
(Fall, Spring, Summer)

This course prepares students to effectively solve business/process/product problems, track process performance, find process and product improvement opportunities, and validate improvements made, using the necessary intellectual tools and procedures including: Five-S, flow charting, Pareto analysis, cause and effect diagrams, histograms, check sheets, scatter diagrams, stratification, statistical process control, failure mode and effects analysis.

ETI 2408C - Welding Fundamentals

3 Credit Hours
(Summer)

This course teaches basic welding processes and techniques for entry-level maintenance technician positions. Students learn welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting.

ETI 2419C - Advanced Concepts of CNC Machines and CNC Machining Practices

3 Credit Hours
(Offered as needed)

This course is designed to provide the student with advanced concepts in CNC machines and CNC machining to include: theory, operation, setup, safety, and practices.

Prerequisite(s): PMT 2261C or PMT 2262C

ETM 1005C - Basic Mechanical Operations

3 Credit Hours
(Spring)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

ETM 1010C - Mechanical Measurement and Instrumentation

3 Credit Hours
(Fall, Spring)

This course provides the foundation for mechanical and electronic measurement techniques used in manufacturing environments. The course will integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, height gages, digital multimeters and other types of measuring equipment.

ETM 1315C - Hydraulics & Pneumatics Fundamentals

3 Credit Hours
(Spring)

This course introduces the student to basic hydraulic and pneumatic fundamentals. Instructional topics will include components, fluid pressure and flow and basic circuit design and application.

ETS 1511C - Motors and Controls

3 Credit Hours
(Fall, Spring)

This course explores the theory and application of AC and DC motors, types of single-phase motors, three-phase power, three-phase motors, remote and local control, forward and reversing motor starters, and various motor control circuits. Wiring and troubleshooting exercises of electric three-phase motor control circuits are emphasized in a wide range of applications.

Prerequisite(s): EET 1084C

ETS 1542C - Introduction to Programmable Logic Controllers

3 Credit Hours
(Fall)

This is an introductory course in Programmable Logic Controllers (PLCs.) The student will learn basic concepts with a focus on programming and practical applications.

Prerequisite(s): EET 1084C

EVR 1001C - Environmental Science

4 Credit Hours ♦
(Offered as needed)

A study of the physical and biological environment and man's ecology with emphasis upon contemporary biological problems.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

EVR 1940 - Internship, Environmental Science

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum grade of "B" in any college level science course and permission of instructor.

FFP 1140 - First Responder for Public Safety Personnel

3 Credit Hours
(Offered as needed)

This course introduces the student to the skills and techniques used for first response to medical emergencies. Classroom instruction includes a variety of medical related topics encountered by public safety personnel. Practical exercises and scenarios are included to enhance classroom instruction and skill development.

FFP 1301 - Fire Service Hydraulics

3 Credit Hours
(Offered as needed)

Introduction to the study and characteristics of hydrostatics and hydrodynamics in the fire service; to include basic hydraulic measuring units, facts, theories, and formulas for problem solving. The course covers the relationship between flow and pressure and mathematical hydraulic formulas.

FFP 1505 - Fire Prevention Practices

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1540 - Private Fire Protection Systems

3 Credit Hours
(Fall, Spring, Summer)

This course is a survey of the principles of fire prevention and investigation. It includes a study of fire hazards in various occupancies; a review of fire prevention codes; a study of procedures and techniques of fire prevention inspection, to include surveying and mapping, recognition and elimination of fire hazards, public relations, methods of determining the area of fire origin, fire cause, fire spread and location and preservation of evidence.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1702 - Principles of Emergency Services

3 Credit Hours
(Fall, Spring, Summer)

This course provides an overview to fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/services; fire loss analysis, organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1740 - Fire Service Course Delivery

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1800 - Disaster Education for Individuals and the Community

3 Credit Hours
(Offered as needed)

This course provides a study of the design, development, and delivery of public disaster safety education and programs including: methods of identification of disaster safety programs, the selection of target programs and strategies of affect reduction, methods of designing and implementing information and educational programs, and methods of evaluating a program's impact. Studies include theoretical and practical skills training in individual, group, and mass media communications, instructional skills, planning priorities, and evaluation techniques.

FFP 1801 - Introduction to Emergency Management Administration

3 Credit Hours
(Offered as needed)

This course will discuss emergency management practices and how they relate to natural and man-made disasters. It is designed to help the student develop an understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

FFP 1810 - Firefighting Tactics and Strategy I

3 Credit Hours
(Fall, Spring, Summer)

This course is a study of the principles utilized on the fire ground for maximum manpower and equipment utilization; fire ground administration starting with a small fire on up through major conflagrations. Emphasis will be on developing thinking skills in relation to crises.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 1826 - Incident Management

3 Credit Hours
(Offered as needed)

This course contrasts the major forms of Incident Management/Incident Command Systems. It illuminates these differences and offers a fresh perspective on the concepts on which these systems are founded in order to make them more accessible and user-friendly. It bridges the gap between their theoretical and academic foundations and their real-world applications, and makes them more applicable to the professional's daily needs.

FFP 1881 - Emergency Management Leadership

3 Credit Hours
(Offered as needed)

This course provides the student with the knowledge and skills necessary for effective interpersonal relationships, including conflict management and the use of power and influence as they apply to emergency administration and leadership. It addresses the budget process and related administrative duties of an emergency management program manager.

FFP 1890 - Emergency Management Principles for Tourism and Hospitality Industry

3 Credit Hours
(Offered as needed)

This course analyzes emergency management functions and responsibilities within the tourism and hospitality industry. Particular emphasis is placed in the areas of administration, organization, communications, and human relations. Students will learn how historical mistakes can influence human response to disaster situations, and some of the current legal and human challenges posed when dealing with disasters.

FFP 2120 - Fire Service Building Construction

3 Credit Hours
(Fall, Spring, Summer)

The curriculum draws from many recognized authorities in exploring the methods and mechanics of imparting information and adult learning principles. The course emphasizes techniques which have wide application in teaching situations, as well as devices for specific areas. Also stressed are measuring teaching effectiveness, the use of media and visual aids.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2610 - Fire Behavior and Combustion

3 Credit Hours
(Fall, Spring, Summer)

Study of cause and origin of fires with emphasis on fire inspector's or fire officer's role in the investigation process. The course deals with determination of fire cause and origin, collection of evidence, and investigator's preparation for trial.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2720 - Company Officer

3 Credit Hours
(Fall, Spring, Summer)

Designed to assist fire officers in solving the varied problems and situations they will be required to manage effectively in today's ever changing fire service. The curriculum includes a review of fire department organization and administration, management theory, leadership, communication, motivation, and small group dynamics.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2770 - Ethical and Legal Issues for the Fire Service

3 Credit Hours
(Fall, Spring, Summer)

This course teaches the federal, state, and local laws that regulate emergency services, national standards influencing emergency services, standard of care, tort, liability, and a review of relevant court cases. It also includes labor relations, human rights and diversity, conflicts of interest and frameworks for ethical decision-making.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2780 - Fire Department Administration

3 Credit Hours
(Fall, Spring, Summer)

The course is designed to present the principles of management theory, and its application in the fire service. The course is intended for officers whose area of responsibility encompasses long and short range planning, budgeting and administration.

Prerequisite(s): FFP 0010 and FFP 0020

FFP 2820 - Emergency Preparedness

3 Credit Hours
(Offered as needed)

This course teaches all aspects of emergency preparedness and planning related to natural and man-made disasters, and basic principles of emergency management. Planning concepts and the planning process will be discussed.

FFP 2823 - Technical Applications in Emergency Management

3 Credit Hours
(Offered as needed)

This course explores issues and problems associated with the use of technology in emergency management. It examines strategies to overcome these issues and problems. Some of the subjects treated are use of the Internet, spatial analysis applications in vulnerability analysis, decision support systems, and emerging technologies.

FFP 2834 - Societal Issues in Disaster Management

3 Credit Hours
(Offered as needed)

This course examines human response to disaster events, including political and economic factors influencing vulnerability. It examines how individuals and institutions make decisions at all levels of disaster response, it is an introduction to current research pertaining to the sociological aspects of disaster, and it will provide increased awareness of the potential and difficulties in using social science research as a basis for modifying public policy.

FFP 2841 - Contingency Planning for the Private Sector

3 Credit Hours
(Offered as needed)

This course is designed to assist students in developing effective public sector plans by using the National Incident Management System and the Incident Command System templates. The curriculum includes case studies and development procedures for private sector logistics management and employee support planning.

FOS 2201 - Food Service Sanitation Management

3 Credit Hours
(Offered as Needed)

This course acquaints students with the Food and Drug Administration's Food Code as well as the challenges and opportunities facing hospitality managers in the area of sanitation management. The class presents a systems approach to sanitation management, utilizing the Hazard Analysis Control Point Program (HACCP), and provides a basic understanding of quality sanitation management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FRE 1120 - French I

4 Credit Hours ❖
(Fall)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

FRE 1121 - French II

4 Credit Hours
(Spring)

Pronunciation and grammatical structures of French, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): FRE 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

FS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu

development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 1001 - Culinary Techniques

3 Credit Hours
(Fall)

Emphasis in this course will be placed on the basic methods and chemistry of cooking. Students study ingredients, cooking, theories, terminology, equipment, technology, weights and measures, formula conversions and work on cooking skills and procedures.

Prerequisite(s): FOS 2201

FSS 1120 - Food and Beverage Purchasing

3 Credit Hours
(Offered as Needed)

Students will learn the fundamentals involved in purchasing food and beverages in quantity. The course emphasizes standardizing, grading and estimating, selecting, receiving and storing foods and beverages, as well as the practical application in writing specifications and in developing purchasing techniques.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 1202L - Food Production I

3 Credit Hours
(Fall)

Students will acquire knowledge and skill in the preparation of food. Included are basic principles and techniques of food preparation, management of resources, use of recipes, use and care of equipment, and evaluation of food products. The course emphasizes safety and sanitation practices.

Prerequisite(s): FOS 2201

FSS 1221L - Food Production II

3 Credit Hours
(Fall)

Students will focus on the knowledge and preparation of meats, poultry, seafood, as well as starches, fruits and vegetables. Students will learn to prepare menus for special dietary needs. This course will utilize all dry and moist methods of cooking. Menu selection and balance will be studied. The course emphasizes safety and sanitation procedures.

Prerequisite(s): FSS 1202L

FSS 1246L - Baking and Pastries I

3 Credit Hours
Students apply the fundamentals of baking science and pastry preparation to produce a variety of bread products and pastries. Special emphasis is given to the application of advanced techniques in bakery management and the use and care of equipment found in bake shops. Preparation of breads and rolls, classical cakes and icings. Student must pass written and practical baking examination covering a variety of techniques and procedures.

Prerequisite(s): FOS 2201

FSS 1250 - Dining Room Management

3 Credit Hours
(Offered Spring)

The various types of service appropriate to coffee shops, dining rooms, luncheons, banquets, and buffets.
The relationship between menu, equipment, supplies, merchandising, and personnel and patron acceptance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2100 - Food Plans and Menu Preparation

3 Credit Hours
(Fall)

Emphasizes the preparation of a nutritionally balanced cycle menu, portion control, use of leftovers and waste control. Students will study and prepare menus supporting the various food service and beverage industries.

FSS 2240L - Classical Cuisine

3 Credit Hours
(Fall)

Students prepare and learn the skills and management theories involved in classical dishes. Concentration is on the basics of classical cuisine, such as stocks, soups, and sauces. Attention is given to the management tasks of portion control, costing and presentation. Special emphasis is given to classics such as emulsion sauces, thickening agents, and sauces derived from the Mother sauces. Student must successfully pass written and practical examination covering a variety of techniques and procedures.

Prerequisite(s): FSS 1221L

FSS 2242L - International and Regional Cuisine

3 Credit Hours
(Fall)

Emphasis is placed on learning to use various condiments and seasonings that are indigenous to different parts of the world in food preparation. Topics may include Far East cuisine, Middle Eastern, Mediterranean, North African cuisine, Continental cuisine. Lectures, demonstrations and preparations will also cover American regional cooking. Student must successfully pass written and practical examination covering a variety of cooking techniques.

Prerequisite(s): FSS 1221L

FSS 2251 - Food and Beverage Management

3 Credit Hours
(Fall)

An application of principles in commercial and institutional food and beverage facilities including marketing, menu development, effective cost control in purchasing, pricing, labor and service technique. Procedure, approaches and techniques of management are explored and developed as they relate to commercial and institutional food and beverage facilities and personnel.

FSS 2284 - Catering, Banquet and Event Management

3 Credit Hours
(Fall)

Students will be taught the logistics of preparation, production, transportation, and implementation of the catered event, including analysis of typical banquet/event contracts. Students learn to determine cost of the project. Emphasis is given to menu planning for various types of banquets, theme buffets, and physical management of floor lay-out and table setup. Training techniques for supervisors in dining room and banquet service is practiced. Development of stewarding and production checklists is practiced.

FSS 2500 - Food and Beverage Cost Control

3 Credit Hours
(Fall)

Emphasis given to methods of menu pricing, systems of controlling and accounting for food and beverage costs and methods of controlling sales income, through cost control systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

FSS 2942 - Culinary Internship

3 Credit Hours
(Fall)

The Program Director has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course provides a planned work-based experience that will provide students with an opportunity to fine-tune skills learned in coursework and enhance workplace skills through supervised practical experiences related to their career objectives. Internship requires a minimum of 135 clock hours of work. May be repeated for credit, but grade forgiveness cannot be applied.

Prerequisite(s): Satisfactory completion of all General Education Classes, a minimum 2.0 institutional or overall GPA; and complete FSS 1202L , HFT 1000 , and FSS 1221L with a grade of "D" or better.

GEA 1000 - World Regional Geography

3 Credit Hours ❖
(Offered as needed)

The course introduces the student to geographic regional studies. It will combine the concepts of physical geography

and cultural, economic, and human geography as it applies to the differing regions of the world. It will show the relationships between the regional environment and the people who live there, between settlement patterns, economic patterns and cultural patterns within each region; and, using current events, it will show the impact of other phenomena upon those regions and their people.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

GEB 1011 - Introduction to Business

3 Credit Hours
(Fall)

Designed to give students a broad understanding of the nature of business and a preliminary idea of the various areas of business specialization.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1214 - Business and Supervision Terminology

2 Credit Hours
(Fall)

This course is designed for students to achieve mastery of the special vocabulary, jargon, and concept terminology associated with general business and supervision in the modern workplace. Students will apply the terms in common workplace scenarios and hypothetical situations, as well as in standard written documents and assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 1940 - Internship - Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Active enrollment in an appropriate technical degree program and permission of the instructor. Knowledge of basic computer and keyboarding skills are strongly recommended.

This course may be taken up to two times for credit.
* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

GEB 1942 - Internship Business

1 Credit Hour
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

GEB 2430 - Business Ethics

3 Credit Hours
(Fall)

This course addresses the legal, moral, and societal issues of ethical conduct in the business environment. Actual case studies are used to illustrate appropriate relationships among employers, employees, customers, stockholders, and other business stakeholders. Topics include: codes of ethics, laws and regulations related to ethics, conflict of interest, and moral philosophies associated with ethical conduct.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2947 - Academic Learning Field Studies I

1 Credit Hour
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2948 - Academic Learning Field Studies II

2 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 2949 - Academic Learning Field Studies III

3 Credit Hours
(Offered as Needed)

This course gives students the opportunity to understand the relationship of theory to practice through participation in a service-learning experience.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 1040C - Introduction to Geographic Information Systems

3 Credit Hours
(Offered as Needed)

This course will provide students with an introduction to Geographic Information Systems (GIS). Lectures will include: What is GIS, GIS applications, fundamentals such as map projections, vector versus raster data models, creating and maintaining geographic databases, spatial analysis and modeling, cartography and map production. Lab Sessions will include the hands on use of the ArcGIS software. Students will receive a 180-day version of the software with their textbook that they can use at home to complete assignments.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

GIS 2401 - GIS Applications in Social Science

3 Credit Hours
(Offered as Needed)

This course surveys the use of GIS for solving spatial problems in the social sciences. Examples from the fields of health, economic geography and real estate, housing, transportation, criminology, among others are used to illustrate how spatial techniques are used to address problems in a GIS environment. Special consideration will be given to the data needs of such operations, the implementation of methods in a GIS environment, and understanding the spatial assumptions and issues that underpin analyses.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

GLY 2010C - Principles of Geology I

4 Credit Hours
(Fall, Spring)

Survey of the composition and dynamic processes of the solid Earth. Topics include planetary geology, mineralogy and petrology, volcanism, surface environments and processes (ocean floor, coastlines, rivers, karst, glaciers, deserts), seismology, surface deformation, Earth's interior, plate tectonics, and mountain formation. Laboratory exercises in mineral and rock identification, interpretation of geological landforms using topographic maps, earthquakes, and basic field methods. Local or regional fieldtrips offered.

GLY 2100C - Principles of Geology II

4 Credit Hours
(Fall, Spring)

Survey of the physical and biological history of the Earth. Course is divided into two parts. First is a review of common minerals, rocks, and fossils; the use of stratified sedimentary rocks to reconstruct past environments and climates; and the theory of plate tectonics. Second is an overview of the origin and early evolution of the Earth,

tectonic formation of continents and oceans, and life through time (first appearance of life, early life in the ocean, Age of Dinosaurs, the Great Ice Age, and the appearance of the first humans). Field and laboratory work in mineral, rock, and fossil identification, description of stratigraphic sections in the field, and geologic map construction and interpretation. Local or regional fieldtrips offered.

GLY 2601C - Introduction to Paleontology

4 Credit Hours
(Fall or Spring)

This course is a survey of prehistoric life. Topics include fossilization, systematics, evolution, ecology, extinction, and the geological history of life. Laboratory work covers the anatomy, classification, and ecology of major phyla of both extinct and extant organisms, including monerans, protists, plant, macroinvertebrates, and vertebrate animals. The course involves local and regional fossil collecting trips.

GRA 1151C - Illustration I

3 Credit Hours
(Offered as needed)

A beginning course to develop basic technical and conceptual skills with a focus on an industry-standard vector-based drawing program. Students will create logos and illustrations typical of graphic design challenges.

▲Technology-Across-the-Curriculum Course.

GRA 1152C - Illustration II

3 Credit Hours
(Offered as needed)

An advanced graphic design course building upon the skills covered in Illustration I; the course includes increased challenges relating to conceptual skills and multi-software integration relating to typical print-based design problems. Access to an appropriate high quality digital camera is required.

Prerequisite(s): GRA 1151C.

▲Technology-Across-the-Curriculum Course.

GRA 2140C - Multimedia I

4 Credit Hours
(Fall, Spring, Summer)

An advanced course covering the development of multimedia projects incorporating a variety of digital media elements. Students will learn an industry standard digital video editing application and the aesthetic and technical considerations involved in content acquisition. Access to a miniDV camcorder suggested.

Prerequisite(s): ART 2602C, GRA 1151C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2141C - Multimedia II

4 Credit Hours
(Offered as needed)

An advanced course covering principles of design and information architecture surrounding interactive multimedia presentations. Students will learn an industry standard interactive DVD media authoring software application. Students will produce a finished interactive DVD.

Prerequisite(s): GRA 2140C.

▲Technology-Across-the-Curriculum Course.

GRA 2190C - Graphic Design I

3 Credit Hours
(Offered as needed)

An intermediate Graphic Design course that focuses on using an industry standard page layout software application. Students will be exposed to the ideas and aesthetics involved in the production of print publications. Access to a high quality digital camera required. It is recommended that students take PGY 1801C at the same time or prior to taking this course.

▲Technology-Across-the-Curriculum Course.

GRA 2191C - Graphic Design II

3 Credit Hours
(Offered as needed)

An advanced Graphic Design course covering the aesthetics and challenges associated with producing complex multi-page printed communications. Access to an appropriate high quality digital camera required.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

GRA 2900 - Independent Study – Graphic Art

1 Credit Hour
(Offered as needed)

This course covers the practical treatment of Graphics/Printing Technology. Emphasis is on individual work projects.

Prerequisite(s): GRA 1151C or PGY 1801C

GRA 2905 - Independent Study – Graphic Design

1 Credit Hour
(Offered as needed)

The student will initiate independent computer related work, utilizing various software and hardware. The course may be taken four times for credit.

Prerequisite(s): GRA 1151C or PGY 1801C

▲Technology-Across-the-Curriculum Course.

GRA 2941A - Internship, Graphic Design

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): GRA 1151C, GRA 2190C, PGY 1801C and permission of the instructor.

GRA 2950C - Advanced Graphic Projects

4 Credit Hours
(Offered as needed)

An advanced Graphic Design course addressing common Graphic Design problems. Students will explore advanced software application functionality and creative, aesthetic, and portfolio development. Access to a high quality digital camera required.

Prerequisite(s): ART 2602C, ART 2603C, GRA 1151C, GRA 2190C, PGY 1801C.

▲Technology-Across-the-Curriculum Course.

HFT 1000 - Introduction to Hospitality Management

3 Credit Hours
(Fall)

This course is an overview of the hospitality industry, and the many different segments of the hospitality and tourism segments are discussed. Scope, size and industry trends are examined. Theories, examples and industry case studies are used to provide students with examples of problem solving tools of management. Basic industry terminology and management concepts are studied. The important role of service is stressed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1250 - Hotel and Resort Operations

3 Credit Hours
(Spring)

This course acquaints students with the operation of a hotel, motel and resort including front office procedures in registering, accounting for and checking out guests, promotional and sales practices, housekeeping, interior

decoration, purchase of furniture, carpeting, linens and supplies, maintenance and engineering of a practical nature, facilities specifications, purchasing and storage.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1300 - Managing Housekeeping

3 Credit Hours
(Fall, As Needed)

Provides an overview of the fundamentals of housekeeping management. Describes management functions, tools, and practices required in today's lodging and institutional housekeeping departments.

HFT 1410 - Front Office Management

3 Credit Hours
(Fall)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 1500 - Marketing and Sales in the Hospitality Industry

3 Credit Hours
(Offered Fall, as needed)

How to sell and promote the many services the food service/lodging industries offer guests. How to operate a sales and convention department.

HFT 2210 - Hospitality Management

3 Credit Hours
(Spring)

Training in the techniques involved in the supervision of employees, developing sound relations with other departments, group discussions, and methods of improvement and development of cost consciousness. Job Analysis and job description techniques are developed. The course explores issues that make managing tourism and hospitality (T&H) businesses different to businesses in other sectors. These issues are faced by small and large T&H businesses alike: from owner-operator cafés, motels or tourism businesses to multi-national hotel chains, international airlines or tour companies.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2223 - Human Relations and Supervisory Development

3 Credit Hours
(Spring)

Designed to provide specific application of proven training systems and methods for managers in the hospitality industry.

HFT 2600 - Hospitality Law

3 Credit Hours
(Offered as needed)

Nature and function of our legal system as it applies to the operation of an INN. Innkeeper-guest relationship, contracts, torts, civil rights and insurable risks are emphasized.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2940 - Hospitality Internship

1 Credit Hour
(Offered Fall, Spring, Summer)

This course guides students through all the skills including directing the activities and solving the complex problems, needed to properly manage the front office of a hotel/motel/resort. The course also acquaints students with the operation of all the departments as they apply to their primary responsibility of selling rooms and serving guests.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2941 - Hospitality Internship

2 Credit Hours
(Offered Fall, Spring, Summer)

This course consists of on-the-job experience supplied by the hotel-motel-resort- restaurant industries. Job placement will be dependent upon the availability of participating hospitality institutions. The course consists of 60 hours per semester of on-the-job instruction accompanied by a seminar class.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HFT 2942 - Hospitality Internship

3 Credit Hours
(Offered Fall, Spring, Summer)

This course, an extension of Hospitality Internship (HFT2941), consists of on-the-job work experience supplied by the hotel, motel, resort and restaurant industries. Students will concentrate on 3 specific areas or functions that are career-goal oriented. Job placement will be dependent upon availability of participating hospitality institutions. The course consists of 90 hours of on-the-job instruction.

Prerequisite(s): HFT 1000 - Introduction to Hospitality Management **3 Credit Hours**
and FOS 2201 - Food Service Sanitation Management **3 Credit Hours**

HIM 1000 - Health Information and Delivery Systems

3 Credit Hours
(Fall, Spring)

Orientation to medical records history and professional associations. Confidentiality, filing, retrieving, indexing, numbering, storage and content of the medical record is also discussed. The course includes job search skills and professional job performance.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1012 - Health Care and Legal Compliance

3 Credit Hours
(Fall, Spring)

In-depth study of federal, state, local laws governing preparation, and use of the healthcare record in the healthcare delivery system.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1432 - Pathopharmacology

3 Credit Hours
(Fall)

Introduction to the nature, cause, and treatment of disease entities and the body's defense mechanisms. Commonly used drugs will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 1442 - Pharmacology for HIM Professionals

2 Credit Hours
(Offered as needed)

Pharmacology for HIM Professionals provides an overview of the pronunciation, spelling, actions and side effects of the most commonly prescribed medications. The course will examine pharmacological terms, abbreviations, and symbols used by healthcare providers to write prescriptions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2253 - CPT Coding - Part 1

3 Credit Hours
(Spring)

Instruction and practice in basic CPT coding conventions, principles of classifying physician services using current procedural terminology (CPT-4), APC, and auditing procedures. Ethical standards of practice will be analyzed.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

(Previously listed as HIM1253)

HIM 2272 - Healthcare Reimbursement

3 Credit Hours
(Summer)

Emphasis on billing regulations for the State of Florida. Course content includes LMRPS, Workers' Compensation laws, Florida Medicare, and claims for automobile accident injuries.

Prerequisite(s): HIM 2253 and HIM 2724 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2291 - CPT Coding Part 2

3 Credit Hours
(Spring)

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, inpatient and outpatient prospective payment systems, encoding software and RBRVs.

Prerequisite(s): HIM 2253 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2724 - ICD Coding Part 1

3 Credit Hours
(Fall)

This course provides a foundation using ICD-10-CM/PCS coding conventions, rules, methodology and sequencing, data sets, documentation requirements, and coding resources.

Prerequisite(s): HSC 1531 and HIM 1432 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

Prereq/Corequisites: BSC 2020C OR (BSC 1085C AND BSC 1086C)

HIM 2729 - ICD Coding Part 2

3 Credit Hours
(Fall)

This course focuses on assigning appropriate ICD, DRG, and Level II (HCPCS) codes to a wide range of original source medical documents. This course increases the quality of code selection by applying the decision process in problem solving using well-defined medical record review methods and guidelines. Ethical practices will be discussed.

Prerequisite(s): HIM 2724 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

HIM 2815C - Professional Practice Experience

3 Credit Hours
(Summer)

Working in a simulated, online environment, students will endeavor to code and bill using nationally recognized, American Health Information Management Association (AHIMA) simulation software.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

HIM 2931C - Special Topics in Health Information Technology

1 Credit Hour
(Summer)

This course is a review of skills and work processes to support classification and coding to become nationally certified in-field. Effective test-taking strategies for certification exams and employability skills will be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

Corequisite(s): HIM 2291 and HIM 2729

* This college credit course is not intended for transfer and may not be applied toward the A.A. degree.

HLP 1081 - Wellness: Practice and Theory

3 Credit Hours
(Fall, Spring, Summer)

A course designed to promote wellness through assessment, instruction and fitness programs which, if applied, will enable the individual to achieve and/or maintain a high quality of health and fitness throughout life. Based on assessment test results a physical examination by a physician may be recommended.

HSA 1100 - Introduction to Health Care

3 Credit Hours
(Fall)

This course provides an overview of the United States Healthcare System, including the economic, social, political, and technological forces that shape the industry. The role of state and federal government and regulatory agencies in healthcare delivery is examined. The fundamental roles and responsibilities of healthcare team members are surveyed. Healthcare safety, security, and infection control procedures will also be discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1100 - Health Education

3 Credit Hours
(Spring)

A systematic and comprehensive coverage of basic factual material, concepts, terminology, and important trends in major health areas of concern today.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HSC 1400 - First Aid

3 Credit Hours
(Spring)

Preparation to meet emergencies that occur in the school, home or on the highway. Instruction and practice in dressing and bandaging, care of wounds, shock, bone and joint injuries, cardiopulmonary resuscitation, transportation of the injured oral poisoning and other medical emergencies.

HSC 1531 - Medical Terminology

3 Credit Hours
(Fall)

An introduction to prefixes, suffixes, root words, combining forms, Latin and Greek forms, spelling, and pronunciation, with emphasis on building a working medical vocabulary based on body systems.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

HUM 1020 - Humanities – Introduction

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

A chronological survey of techniques and forms related to art, dance, film, literature, music, philosophy, religion and theater. Art works and selected readings are utilized as much as possible. The course includes Writing-Across-the-Curriculum and Speaking-Across-the-Curriculum. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 1905A - Independent Study – Arts and Humanities

1 Credit Hour
(Fall, Spring, Summer)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue nonscheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval is required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): approval from department chair, a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

HUM 2250 - Humanities – A Contemporary Perspective

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

This course is an integrated study of the artistic, cultural, philosophic, religious, social, and technological influences that shape modern western cultures in the modern era. The focus will begin with the 20th century and follow, chronologically, the issues of the modern era. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2700 - Humanities – Foreign Study

3 Credit Hours ❖ ¶
(Offered as needed)

A variable humanities content course designed to allow students first-hand learning experiences outside the United States. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

HUM 2920 - Humanities Colloquium

1 Credit Hour
(Fall, Spring, Summer)

Humanities Colloquium is a lab designed to introduce students to critical visual and listening skills to become an intelligent arts consumer. Initial lecture sessions are devoted to discussions of the elements of analysis of art works, music pieces, theater performances, and dance presentations. Students will be required to attend selected NWFSC Visual and Performance Arts presentations and to write a short critical review of each. Topics may vary.

Prerequisite(s): placement test may be required.

HUM 2930 - Humanities – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

HUN 2201 - Nutrition

3 Credit Hours
(Fall, Spring, Summer)

The role of nutrients in maintenance of physiological well-being. Application of nutrition principles to the individual and family as well as to some selected problems.

IDS 2220 - Issues in Science and Religion

3 Credit Hours
(Fall, Spring, Summer)

This course will explore and relate scientific and religious conceptions of the natural world. Survey of major scientific discoveries and theories that both challenge and inform religious belief (including Big Bang cosmology, geologic time,

evolutionary biology and paleontology, and Earth systems/global change). Survey of the historic role of religion and religious cosmologies in the rise of science, types of religious experience, concepts of God and divine action, the idea of the sacred as the ground for meaning in nature, natural theology and theology of nature, intelligent design, varieties of creationism, and various metascientific proposals (Anthropic Principle, Gaia Hypothesis, Biophylia, Deep Ecology). Emphasis is placed on integrating and harmonizing scientific and religious understandings to develop a more meaningful and informative, contemporary worldview.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

ISC 1003 - Natural Disasters – Causes, Consequences, Human Response

3 Credit Hours
(Fall, Spring, Summer)

This interdisciplinary course investigates natural catastrophic events, such as earthquakes, volcanic eruptions, tsunamis, hurricanes and floods. This class will use an environmental studies approach to examine how modern society exacerbates the damage caused by these natural phenomena and methods to mitigate human suffering. The student will gain an appreciation of humankind's relationship to the natural environment.

ISS 1905 - Independent Study – Social Science

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of students interested in a specialized area of the social sciences for which present course availability is limited.

This course may be taken up to four times for credit.

LEI 1544 - Outdoor Recreation Management

3 Credit Hours
(Fall, Spring)

This course examines the fundamental influences on outdoor recreation. The course also provides information on hazards, conservation considerations, and safety factors in planning and organizing outdoor recreations. Basic first aid, CPR, and AED training is incorporated as it pertains to outdoor recreation. Field trips may be assigned as warranted.

LIN 1670 - Writing and Grammar

3 Credit Hours
(Fall, Spring, Summer)

The course includes practice in writing short essays and encompasses a comprehensive review of grammar and mechanics. This course is strongly recommended for students who have completed Developmental Writing, those who want a preparation for Composition, or those who score 103-116 on the PERT.

Prerequisite(s): A passing score on the standardized placement test measuring communications/verbal achievement, successful completion of any required developmental English coursework with a minimum grade of "C", or exemption from placement testing.

LIS 1001 - Library Skills

1 Credit Hour
(Offered as needed)

A self-paced course on how individual students can make effective and efficient use of library resources. Students develop the basic information literacy skills necessary for college coursework, general research, and for lifelong learning in an information centered society.

LIS 2004 - Introduction to Internet Research

1 Credit Hour ▲
(Offered as needed)

Introduction to Internet Research is a one-credit hour course offered only online. The course focuses on methods of accessing information resources available through the internet. Students learn to design search strategies, retrieve, evaluate, and cite internet resources.

Prerequisite(s): a full service Internet account, including an electronic mail address from an Internet Service Provider (ISP), or access through a corporate or educational institution prior to beginning the course.

▲ Courses listed with this symbol address NWFSC's **Technology-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic technology use.

LIT 2090 - Contemporary Literature

3 Credit Hours ❖ ¶
(Offered as needed)

Studies in contemporary literature, focusing on comments on modern man. May be used as Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2100 - World Literature I

3 Credit Hours ❖ ¶
(Fall)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from antiquity through the Renaissance, that reflect cultural and intellectual heritage. May be used as a Humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet the Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2120 - World Literature II

3 Credit Hours ❖ ¶
(Spring)

Designed to encourage students to know and appreciate the great literature that helps to mold their thinking and everyday living. Includes, without regard to national origin, those masterpieces of world literature, from the Renaissance to the present, that reflect cultural and intellectual heritage. May be used as a humanities credit. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101. (Note: LIT 2100 is not a prerequisite for this course)

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

LIT 2335 - Introduction to Children's and Adolescent Literature

3 Credit Hours ❖
(Offered as needed)

Designed to explore the range and diversity of the children's literary canon, surveying the historical development of children's and adolescent literature (pre-school to eighth grade) and the construction of socio-cultural influences. While the focus is predominantly on classic works from the tradition of American and British fiction, poetry, folklore and fairy tales, drama, and picture books, the course nonetheless addresses multi-cultural issues and texts in order to broaden the cultural vision provided by the literary study. This course will be a General Education elective, but will not meet the Humanities or English General Education requirements. Course has international/diversity focus for Teacher Education program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

LIT 2603 - Literature of War in the 20th Century

3 Credit Hours ❖
(Offered as needed)

Designed to investigate the historical, psychological, and universal issues that face societies in times of war, through analysis of a range of literary genre and texts, including fiction, poetry, drama, letters, and memoirs focusing on wars of the modern era. The approach is global, but concentrates heavily on the war experiences of the United States. This course will be a General Education elective, but will not meet Humanities or English General Education requirements. Course has International/Diversity focus for Teacher Ed program common prerequisites.

Prerequisite(s): ENC 1101.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

MAC 1105 - College Algebra

3 Credit Hours ♦
(Fall, Spring, Summer)

This is a function-based college algebra course which includes the following topics: functions and functional notation; domains and ranges of functions; graphs of functions and relations; operations on functions; inverse functions; linear, quadratic, and rational functions; absolute value and radical functions; exponential and logarithmic properties, functions, and equations; systems of equations and inequalities; and applications of functions (curve fitting, modeling, optimization, exponential/logarithmic growth and decay). Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAT 1033A or equivalent with a "C" or better or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 1105L - College Algebra Lab

1 Credit Hour
(Fall, Spring, Summer)

A hands-on lab designed to improve students' success rates in the MAC 1105 - College Algebra course. Students will work on all topics covered in MAC 1105. Emphasis will be placed on strengthening algebraic skills through a variety of nontraditional approaches to learning, including small group collaboration and computer-based interactive learning. Meets specific general education requirements. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a "C" or better, or appropriate placement scores

Corequisite(s): MAC 1105.

MAC 1114 - Trigonometry

3 Credit Hours
(Fall, Spring, Summer)

This is the second course in a Pre-calculus sequence which includes the following topics: definitions, graphs, and properties of the six trigonometric functions and their inverses; trigonometric identities; solving trigonometric equations; solving right and oblique triangles and applications; complex numbers; vectors; and the polar coordinate

system. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1140 with a grade of “C” or better or equivalent; or appropriate placement score. This course may be taken concurrently with MAC 1140 with special permission of the Mathematics Department.

MAC 1140 - Pre-Calculus Algebra

3 Credit Hours
(Fall, Spring, Summer)

This is the first course in a two-course Pre-calculus sequence which includes the following: equations and inequalities; linear, quadratic, logarithmic and exponential functions and relations; systems of equations; matrices and determinants, mathematical proof techniques, including mathematical induction; binomial theorem; sequences and series; and applications of algebraic techniques in the real world. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 with a grade of “C” or better, or equivalent; or appropriate placement score.

MAC 2233 - Business Calculus

3 Credit Hours
(Fall, Spring, Summer)

This is a calculus course covering limits, continuity, differentiation, and integration with emphasis on business applications. There is some mathematical theory; but, in general, topics are approached from an intuitive and applied point of view. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 with a grade of "C" or better; or completion of MAC 1105 with a grade of "C" or better, and a "C" or better in another Gordon Rule Mathematics course; or appropriate placement score.

MAC 2311 - Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a three-course sequence. The course covers the following: limits and continuity, rules of differentiation, chain rule, derivatives of trigonometric, inverse trigonometric, logarithmic, and exponential functions, applications of derivatives to curve sketching, L'Hopital's Rule, indeterminate forms, and maxima/minima problems, mean value theorem, Rolle's theorem, definite and indefinite integrals, Fundamental Theorem of Integral Calculus, area, and applications of integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Completion of MAC 1140 and MAC 1114 with a grade of "C" or better or equivalent; or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MAC 2312 - Calculus II

4 Credit Hours
(Fall, Spring, Summer)

This is the second course in a three-course sequence. The course covers the following: techniques for finding areas, volumes, arc lengths and surface areas, methods of integration, including integration by parts, trigonometric substitution, and partial fractions, improper integrals, conic sections, graphing and area in polar coordinates, infinite sequences and series, tests for absolute and conditional convergence of series, and power series. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2311 with a grade of “C” or better or equivalent.

MAC 2313 - Calculus III

4 Credit Hours
(Fall, Spring, Summer)

This is the third course in a three-course sequence. The course includes the following topics: vectors, lines and planes in space, quadric surfaces, vector-valued functions and motion in space, functions of two or more variables, partial derivatives, gradients, directional derivatives, and their applications, multiple integrals in rectangular, cylindrical, and spherical coordinates, and their applications, line integrals, and surface integrals. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade of “C” or better or equivalent.

MAD 2104 - Introduction to Discrete Mathematics

3 Credit Hours
(Fall)

This course is designed for those students who are majoring in computer science, mathematics, engineering, mathematics education, and other highly technical fields. Topics include formal logic, set theory, combinatorics, mathematical induction, relations and functions, recursion, and graph theory. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a grade of "C" or better in MAC 1140. A course in programming is recommended.

MAN 2021 - Management

3 Credit Hours
(Fall)

Each function of management is analyzed and described in a systematic manner. Both the distilled experience of practical managers and the findings of scholars are presented. Other aspects of management are presented such as management process and concepts analysis of the technical knowledge and skills of managers, influences upon managerial decision-making process, and the psychological principles inherent in management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 2300 - Personnel Management

3 Credit Hours
(Spring)

An introduction to personnel practices and procedures. Topics include the personnel management system, maximizing employee potential, organizational behavior, and labor management relations.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAP 2302 - Differential Equations

3 Credit Hours
(Fall, Spring)

This course provides an introduction to ordinary differential equations with an emphasis on first and second order linear equations and applications. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): either completion of MAC 2313 with a "C" or better or concurrent enrollment in MAC 2313. Equivalent courses from other institutions may be used to meet the prerequisite.

MAR 2011 - Introduction to Marketing

3 Credit Hours
(Fall)

An introductory course in the field of marketing including a look at marketing as it exists in our economy today. Consideration of the market, the product, distribution channels. Special emphasis on the study of human behavior in marketing promotion.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAS 2103 - Linear Algebra

3 Credit Hours
(Offered as needed)

This is an introductory course in Linear Algebra intended to give students enough insight to enable successful pursuit of more abstract mathematics courses. This course includes the study of matrices and systems of equations, determinants, vector spaces, linear transformations, orthogonality, eigenvalues, and eigenvectors. Exercises using MATLAB will be required. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 2312 with a grade or “C” or better, or equivalent.

MAT 1033A - Intermediate Algebra

4 Credit Hours
(Fall, Spring, Summer)

This is an intermediate algebra course designed to prepare students for general education mathematics/statistics courses. This course emphasizes concepts, techniques, and applications of the following major topics; factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-

variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions. This course may be used as an elective, but does not meet Gordon Rule requirements for B.A.S., A.A., or A.S. transfer students.

Prerequisite(s): a passing score on the standardized placement test measuring mathematics achievement, successful completion of MAT 0028 with a grade of "C" or better, or exemption from placement testing.

MAT 1033L - Intermediate Algebra Laboratory

1 Credit Hour
(Fall, Spring, Summer)

A hands-on lab designed to improve students' chance for success in the MAT1033A Intermediate Algebra course. Students will work to strengthen skills required to master the topics covered in Intermediate Algebra. The topics include, but are not limited to, factoring, algebraic functions, radicals and rational exponents, complex numbers, quadratic equations, rational equations, two-variable linear equations/inequalities and their graphs, systems of linear equations and inequalities, and an introduction to functions

Prerequisite(s): MAT 0028 or equivalent with a grade of "C" or better, or a score of 110-122 on the PERT, or on an elective basis with a score of 123 or higher on the PERT.

Corequisite(s): MAT 1033A

*Students scoring 110-113 on the PERT may enroll in MAT 1033A if they also enroll in MAT 1033L. Students should see an academic advisor.

MAT 2905 - Applied Teaching Techniques for Mathematics

4 Credit Hours
(Summer)

The goals of this course are: refinement or acquisition of mathematics skills and connections between mathematics topics needed for successfully tutoring in an academic setting; acquisition of general methods of tutoring as well as specific tutoring techniques needed for specific courses. Teacher-tutor seminars, teacher-tutor conferences, and formal instruction will supplement the extensive tutoring experiences. Prerequisite: Consent of the department. A minimum grade of "C" is required.

Prerequisite(s): Admission to the BS Middle Grades Math degree program

MCB 2010C - Microbiology, Allied Health

4 Credit Hours
(Fall, Spring, Summer)

This course is designed for students entering programs in the numerous health fields, but primarily for pre-nursing students. The material presented covers the fundamentals of microbiology needed to understand the biology of infectious diseases and the agents that cause them. Not recommended for biology, pre-med, pre-vet, and dentistry.

Prerequisite(s): CHM 1020 or CHM 1045C or BSC 1005 or BSC 1010C or BSC 1085C.

MET 1010C - Introduction to Meteorology

4 Credit Hours
(Fall, Spring, Summer)

Structure of the atmosphere; weather processes, systems and phenomena; climate and climatic change, economic impact of weather. May be used to satisfy the AA degree Physical Science requirement for career goals other than sciences, engineering and pre-professional fields.

MGF 1106 - Practical Applications of Mathematics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. It includes systematic counting, probability, statistics, history of mathematics, geometry, sets, and logic. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): Students who are exempt from placement testing may enroll in this course with no prerequisites.
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 114 or higher on the math section of the PERT OR
(2) successful completion of MAT 0028 with a grade of "C" or better or equivalent or higher mathematics course

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MGF 1107 - Math in Society

3 Credit Hours ♦
(Fall, Spring, Summer)

This course is designed for those students requiring only general education mathematics courses. Topics include numeration and mathematical systems, number theory, linear and exponential growth, history of mathematics, voting techniques, graph theory, and consumer mathematics. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s):
Students who are NOT exempt from placement testing may meet the prerequisite through any one of the following:
(1) 123 or higher on the math section of the PERT OR
(2) successful completion of MGF 1106 with a grade of "C" or better or equivalent or higher mathematics course OR
(3) concurrent enrollment in MGF 1106

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

MKA 2021 - Professional Selling

3 Credit Hours
(Fall)

Selling, correct attitudes and personal attributes for dealing with the public on a business or professional basis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2041 - Retail Management

3 Credit Hours
(Spring)

This course covers retail store management, location, buying merchandise, control policies, services, pricing, expenses, profits, training and supervision of retail sales forces, and administrative problems. Also includes a variety of current perspectives in retailing management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MKA 2511 - Introduction to Advertising

3 Credit Hours
(Spring)

Advertising as a marketing tool, its planning, creation, and use. A survey of copy writing, layout, and media (newspapers, magazines, radio, television, films, etc.)

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1161 - Customer Service

3 Credit Hours
(Fall)

Designed to build and maintain the critical skills necessary to be a dynamic and successful professional. Students and front-line individuals who work with customers every day will develop strategies to create positive customer relationships. This course provides a practical approach to the thorny issues of customer dissatisfaction and will enable managers to keep service personnel focused on the organization's goals and objectives.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1345 - Supervision I

3 Credit Hours
(Spring)

The course presents the functions of a personnel manager, philosophy of general management, organizational structure, employer socioeconomic climate and career information. Included also are job descriptions and specifications, recruiting practices, applications, resumes, interviewing, placement, performance appraisals, wage and salary administration and other related topics.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 1346 - Supervision II

3 Credit Hours
(Offered as needed)

The course presents a continuing study of the functions of a personnel manager, philosophy of general management, employee socioeconomic climate and other information. Included are orientation, training, labor unions, safety, health

and other related topics.

Prerequisite(s): MNA 1345 is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2100 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to help students develop an understanding of how they may be motivated to work together in greater harmony in all kinds of organizations. The basis of human motivation and how it is influenced by leadership, the organization itself, and the social environment in which the organization exists.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MNA 2141 - Leadership Techniques

3 Credit Hours
(Offered as needed)

This interdisciplinary course addresses leadership in a group setting and focuses on leadership development through discussion, readings, group and individual projects and other applied activities.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 1001 - Foundations of Officership

1 Credit Hour
(Fall)

This course examines the unique duties and responsibilities of officers, organization and role of the Army, reviews skills pertaining to fitness and communication, and analyzes Army values and expected ethical behavior. Requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 1002 - Basic Leadership

1 Credit Hour
(Spring)

This course presents fundamental leadership concepts and doctrine, the practice of basic skills that underlie effective problem solving, and examines the officer experience. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 2101 - Individual Leadership Studies

2 Credit Hours
(Fall)

This course develops knowledge of self-confidence and individual leadership skills. It develops problem solving and

critical thinking skills, as well as how to apply communication, feedback, and conflict resolution skills. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MSL 2102 - Leadership and Teamwork

2 Credit Hours
(Spring)

This course focuses on self-development guided by knowledge of self and group processes, challenges current beliefs, knowledge, and skills. This course requires participation in a weekly one-hour leadership laboratory. Students are required to participate in a one-hour physical training session three times a week and will be evaluated on their performance of the Army Physical Fitness Test.

MTB 1103 - Business Mathematics

3 Credit Hours
(Fall)

This course presents basic principles used to solve everyday business problems, including a review of basic skills and business terminology. Topics in the course include the following: base, rate and percentage, trade and cash discounts, wage and salary administration, insurance (fire and automobile), depreciation and business profits, distribution of corporate dividends, simple interest and bank discount, and buying and selling of corporation bonds and stocks.

Prerequisite(s): completion of MAT 0028 with a "C" or better or satisfactory test scores. Knowledge of basic computer and keyboarding skills are strongly recommended.

MTG 2206 - College Geometry

3 Credit Hours
(Spring)

This course emphasizes Euclidean geometry and its relationship to logic, trigonometry, and coordinate geometry. The problems, proofs, constructions, and graphs involve the following: line segments, angles, triangles, polygons, parallel and perpendicular lines, slopes of lines, circles, and similarity. Trigonometry is presented in terms of right triangle relationships. Logic is the basis for deductive reasoning in proofs of theorems. Lines and other geometric figures are graphed in the rectangular coordinate system. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAC 1105 or equivalent with a “C” or better.

MUH 2930 - Music Humanities – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

MUL 1010 - Music Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

Designed to develop a more intelligent understanding of and appreciation of music. By methodically surveying the main periods of Western Art Music from the Medieval Period through present day, this class will bring about an awareness of music as a vital source in human life, and will aid in developing positive attitudes toward culture and the fine arts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

MUM 1620 - Audio and Acoustic Fundamentals

3 Credit Hours
(Fall, Spring, Summer)

Audio and Acoustic Fundamentals explores the basics of audio systems and equipment and the acoustical environment in which they are used. Emphasis is placed on equipment terminology, function and acoustical listening. The two basic fundamentals are summed together to begin laying the basic foundation required to operate audio and recording equipment.

MUM 2300 - Introduction to the Music Industry

3 Credit Hours
(Summer)

This course is an introduction to the history, principles, and practices of the music industry. Topics will include music publishing, copyright, distribution, industry organization, producing, and general business functions.

MUM 2600 - Recording Techniques I

3 Credit Hours
(Fall, Spring, Summer)

This course is designed as an introduction to basic audio engineering and studio practices. Listening exercises, phychoacoustics, microphone characteristics, and studio etiquette will be studied. In addition the student will study techniques and practices and procedures of multi-track recording, acoustical balancing, editing, and over dubbing in a variety of situations.

Prereq/Corequisites: MUM 1620

MUM 2601 - Recording Techniques II

3 Credit Hours
(Fall, Spring, Summer)

This course explores advanced multi-track recording skills and audio production techniques, edits, use of outboard equipment and live multi-track recording.

Prerequisite(s): MUM 1620, MUM 2600.

MUM 2604 - Multi-Track Mixdown (Post Production)

3 Credit Hours
(Fall, Spring, Summer)

This course explores the application of signal processing equipment as it relates to multi-track master mixdowns. In addition, software and hardware application of mixdown is applied to post-production practices.

Prerequisite(s): MUM 1620, MUM 2600, MUM 2601.

MUN 1000 - Summer Ensemble Workshop

3 Credit Hours
(Summer)

An ensemble workshop open to any student who desires to improve vocal and physical presentation skills. A variety of musical physical styles will be studied and performed. Students participating in Summer Ensemble Workshop will be expected to participate in several scheduled performances.

Prerequisite(s): experience in high school or a desire to learn.

MUN 1001 - Summer Ensemble Workshop II

3 Credit Hours
(Summer)

An ensemble workshop and performance to improve vocal and physical presentation skills. A variety of musical physical styles will be studied and performed. Students participating in Summer Ensemble Workshop II will be expected to participate in several scheduled performances.

Prerequisite(s): MUN 1000.

MUN 1002 - Summer Ensemble Workshop III

3 Credit Hours
(Summer)

An ensemble workshop open to any student who desires to improve vocal and physical presentation skills. A variety of musical physical styles will be studied. Students participating in Summer Ensemble Workshop will be expected to

participate in several scheduled performances.

Prerequisite(s): MUN 1000, MUN 1001.

MUN 1140C - Wind Ensemble I

1 Credit Hour
(Fall, Spring)

An instrumental ensemble providing an outlet and learning experience to study and perform standard wind band literature, to improve individual instrumental skills, and to sharpen ensemble techniques. The Wind Ensemble performs in both on and off campus venues.

Prerequisite(s): experience in high school or community band programs.

This course may be taken up to four times for credit.

MUN 1310 - Women's Ensemble

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student having experience in reading music. A variety of musical styles will be studied and performed. Students electing NWFSC Chorus will be expected to participate in scheduled performances.

Prerequisite(s): Experience in high school choruses or choirs.

This course may be taken up to four times for credit.

MUN 1340A - NWFSC Show Choir I

1 Credit Hour
(Fall, Spring)

A study of the fundamental techniques and principles of integrating dance, voice, music and acting into a performance show choir. Training in voice, jazz movement, character interpretation and personality presentation is covered. Membership is open to all part-time or full-time students on a credit or audit basis. All music majors and performance majors must participate. The show choir appears in public performances at frequent intervals throughout the year.

Prerequisite(s): Audition, consent of department, music or performance minor.

This course may be taken up to four times for credit.

MUN 1360 - Madrigal Singers I

1 Credit Hour
(Offered Fall, Spring)

Auditioned a cappella ensemble teaching choral styles that range from the Renaissance madrigal to present day,

such as vocal jazz, spirituals and contemporary choral works. This course if for the "first year" student.

Prerequisite(s): Audition based on vocal quality, musicianship and sight reading ability.

This course may be taken up to four times for credit.

MUN 1390 - Symphony Chorale I

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student. The Symphonic Chorus will study and perform literature for the large sized chorus.

Prerequisite(s): audition or permission of instructor.

This course may be taken up to four times for credit.

MUN 1421 - Flute Ensemble

1 Credit Hour
(Fall, Spring)

The study and performance of flute ensemble and flute choir music in a musical group.

Prerequisite(s): audition or instructor recommendation only.

This course may be taken up to four times for credit.

MUN 1710A - Rock and Jazz Ensembles I

1 Credit Hour
(Fall, Spring)

Music performing organization open to any student who wants to develop his or her performance repertoire. Laboratory studies include techniques of performing music, literature, practices, styles and media applicable to designated organized ensemble.

Prerequisite(s): Some experience in high school bands, etc.

This course may be taken up to four times for credit.

MUN 1720A - Rock and Jazz Ensembles II

1 Credit Hour
(Fall, Spring)

Music performing organization open to any student who wants to develop his/her performance repertoire. Laboratory studies include techniques of performing music, literature, practices, styles and media applicable to designated organized ensemble.

Prerequisite(s): experience in high school bands.

This course may be taken up to four times for credit.

MUN 2141C - Wind Ensemble II

1 Credit Hour
(Fall, Spring)

An instrumental ensemble providing an outlet and learning experience to study and perform standard wind band literature, to improve individual instrumental skills, and to sharpen ensemble techniques. The Wind Ensemble performs in both on and off campus venues.

Prerequisite(s): experience in high school or community band programs.

This course may be taken up to four times for credit.

MUN 2311 - Women's Ensemble II

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student having experience in reading music. A variety of musical styles will be studied and performed. Students electing Women's Ensemble will be expected to participate in scheduled performances.

Prerequisite(s): MUN 1310

This course may be taken up to four times for credit.

MUN 2361 - Madrigal Singers II

1 Credit Hour
(Fall, Spring)

Auditioned a cappella ensemble teaching choral styles that range from the Renaissance madrigal to present day, such as vocal jazz, spirituals and contemporary choral works. This course is for the "second year" student.

Prerequisite(s): MUN 1360.

This course may be taken up to four times for credit.

MUN 2371 - NWFSC Show Choir II

1 Credit Hour
(Fall, Spring)

A study of the fundamental techniques and principles of integrating dance, voice, music and acting into a performance show choir. Training in voice, jazz movement, character interpretation and personality presentation is covered. Membership is open to all part-time or full-time students on a credit or audit basis. All music majors and performance majors must participate. The show choir appears in public performances at frequent intervals throughout the year.

Prerequisite(s): MUN 1340A.

This course may be taken up to four times for credit.

MUN 2392 - Symphony Chorale II

1 Credit Hour
(Fall, Spring)

A music organization open through auditions to any student. The Symphony Chorus will study and perform literature for the large sized chorus.

Prerequisite(s): MUN 1390.

This course may be taken up to four times for credit.

MUS 1905A - Independent Study – Music

1 Credit Hour
(Offered as needed)

A defined independent study which is pursued under supervision of a faculty directing teacher and recorded through departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized or advanced nature and not available through classes or courses available on a college schedule. Departmental approval required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of “C” is also required.

Prerequisite(s): Approval from department chair, a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

MUS 2930 - Music – Special Topics

3 Credit Hours
(Fall, Spring)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

*This course may be taken up to four times for credit.

MUT 1001 - Fundamentals of Music

3 Credit Hours
(Fall, Spring, Summer)

A pre-theory course for the music major, non-music major, or for the elementary education major.

MUT 1111 - Music Theory I

3 Credit Hours
(Fall, Spring)

A study of the fundamentals of basic musicianship, music notation, simple rhythms, key signatures, intervals, major and minor scales, intervals, triads, 7th chords, polyphonic composition and elementary keyboard work. This course also introduces students to tools necessary for analyzing musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1241

MUT 1112 - Music Theory II

3 Credit Hours
(Fall, Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, species counterpoint, chord structures, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1111

Corequisite(s): MUT 1242

MUT 1241 - Ear Training and Sight Singing I

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1001 or Approval of Theory Faculty and successful completion of Theory Fundamentals Exam

Corequisite(s): MUT 1111

MUT 1242 - Ear Training and Sight Singing II

1 Credit Hour
(Fall, Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, simple & compound rhythms identification and dictation, interval identification and dictation, major and minor scales identification and dictation, triad identification and dictation, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1241

Corequisite(s): MUT 1112

MUT 2116 - Music Theory III

3 Credit Hours
(Fall)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including secondary chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries.

Prerequisite(s): MUT 1112

Corequisite(s): MUT 2246

MUT 2117 - Music Theory IV

3 Credit Hours
(Spring)

A continuing study of the fundamentals of basic musicianship, music notation, rhythms, musical structures, basic and advanced harmonic structures including modulation, non-tonicizing fully diminished 7th chords, augmented 6th chords, mode mixture, Neapolitan chords, polyphonic composition and keyboard work. This course is a continuing study of analytical models used for musical compositions of the 17th & 18th centuries while providing an introduction to Romantic period and chromatic musical structures.

Prerequisite(s): MUT 2116

MUT 2246 - Ear Training and Sight Singing III

1 Credit Hour
(Fall)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 1242

Corequisite(s): MUT 2116

MUT 2247 - Ear Training and Sight Singing IV

1 Credit Hour
(Spring)

A study of the fundamentals of basic musicianship with specific focus on elements of ear training and sight singing including, music notation, intermediate and advanced rhythmic identification and dictation, identification and dictation of advanced sonorities, and melodic and rhythmic dictation. This student will incorporate both rhythmic and tonal syllable systems.

Prerequisite(s): MUT 2246

Corequisite(s): MUT 2117

MVB 1201 - Applied Music Secondary – Brass I

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For nonmusic majors and music majors.

This course may be taken up to four times for credit.

MVB 2202 - Applied Music Secondary – Brass II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For nonmusic majors and music majors.

Prerequisite(s): MVB 1201.

This course may be taken up to four times for credit.

MVK 1211 - Applied Music – Piano I

1 Credit Hour
(Fall, Spring)

Private instruction in piano, as secondary instrument, consisting of one half-hour lesson per week. Minimum of one hour daily practice is required.

This course may be taken up to four times for credit.

MVK 1311 - Applied Music - Piano I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in Piano in the freshman year of study as the student's principal performing medium. This one hour, weekly lesson is for intended piano majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which three-four memorized selections from standard literature will be required.

Prerequisite(s): MVK 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVK 2221 - Applied Music – Piano II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in piano, as a secondary instrument, consisting of one half-hour lesson per week. Minimum of one hour daily practice is required.

Prerequisite(s): MVK 1211.

This course may be taken up to four times for credit.

MVK 2321 - Applied Music - Piano II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in Piano in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended piano majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which a memorized sonata movement and three-four memorized selections from standard literature will be required.

Prerequisite(s): MVK 1211, MVK 1311 and Division Chair approval.

This course may be taken up to four times for credit.

MVP 1201 - Applied Music Secondary – Percussion I

1 Credit Hour
(Fall, Spring)

Private instruction in percussion instruments to develop the student's performance ability in an applied area. One half-hour private lesson per week. Minimum of one hour daily practice is required.

This course may be taken up to four times for credit.

MVP 2202 - Applied Music Secondary – Percussion II

1 Credit Hour
(Fall, Spring)

Private instruction in percussion instruments to develop the student's performance ability in an applied area. One half-hour private lesson per week. Minimum of one hour daily practice.

Prerequisite(s): MVP 1201.

This course may be taken up to four times for credit.

MVS 1016 - Applied Strings – Guitar I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction on guitar. Designed to equip the student for continuing study leading progressively to greater

proficiency.

This course may be taken up to four times for credit.

MVS 1017 - Applied Strings – Bass Guitar I

1 Credit Hour
(Fall, Spring)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

This course may be taken up to four times for credit.

MVS 1201 - Applied Music Secondary – Strings I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

This course may be taken up to four times for credit.

MVS 2026 - Applied Strings – Guitar II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

Prerequisite(s): MVS 1016.

This course may be taken up to four times for credit.

MVS 2027 - Applied Strings – Bass Guitar II

1 Credit Hour
(Fall, Spring)

Private instruction in guitar. Designed to equip the student for continuing study leading progressively to greater proficiency.

Prerequisite(s): MVS 1017.

This course may be taken up to four times for credit.

MVS 2202 - Applied Music Secondary – Strings II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

Prerequisite(s): MVS 1201.

This course may be taken up to four times for credit.

MVV 1211 - Applied Music – Voice I

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour session per week, with a minimum of one hour daily practice.

This course may be taken up to four times for credit.

MVV 1311 - Applied Music - Voice I for Majors

2 Credit Hours
(Fall, Spring, Summer)

Private instruction in voice in the freshman year of study as the student's principal performing medium. This one hour weekly lesson is for intended voice majors, and requires Division Chair approval. A major component of this class is a required juried performance at the end of the semester for which four memorized selections from standard literature will be required.

Prerequisite(s): MVV 1211 and Division Chair approval.

This course may be taken up to four times for credit.

MVV 2221 - Applied Music – Voice II

1 Credit Hour
(Fall, Spring, Summer)

Private instruction in voice, as a secondary instrument, consisting of one half-hour lesson per week, with a minimum of one hour daily practice.

Prerequisite(s): MVV 1211.

This course may be taken up to four times for credit.

MVV 2322 - Applied Music - Voice II for Majors

2 Credit Hours
(Offered as needed)

Private instruction in voice in the sophomore year of study as the student's principal performing medium. This one hour, weekly lesson is for intended voice majors, and requires Division Chair Approval. A major component of this class is a required juried performance at the end of the semester for which six memorized selections from standard

literature will be required.

Prerequisite(s): MVV 1211, MVV 1311 and Division Chair approval.

This course may be taken up to four times for credit.

MVW 1201 - Applied Music Secondary – Woodwinds I

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

This course may be taken up to four times for credit.

MVW 2202 - Applied Music Secondary – Woodwinds II

1 Credit Hour
(Fall, Spring)

Private instruction: one half-hour private lesson per week. Minimum one hour daily practice. For non-music majors and music majors.

Prerequisite(s): MVW 1201.

This course may be taken up to four times for credit.

NSP 2049L - Nursing Practice Readiness

1 Credit Hour
(Fall, Spring)

This elective laboratory course assists the nursing student to prepare for the RN licensure examination (NCLEX-RN). Web-based instructional methodologies allow the student to complete the course within a self-paced time frame. Students practice test taking skills, self-evaluation and other strategies to gain confidence in sitting for the NCLEX-RN.

Prerequisite(s): NUR 2241C or permission from Nursing Program Director.

Special Nursing Program policies may apply to this course.

NUR 1021C - Nursing Process I

6 Credit Hours
(Fall, Spring)

This course introduces concepts and principles of holistic nursing care. Students will build on knowledge obtained in the biophysical and psycho-social sciences in this first of four required clinical nursing courses in the nursing curriculum. Theory content includes an introduction to healthcare systems ethical-legal aspects of nursing practice, health and illness, communications, functional health patterns of clients, stress-adaptation, professional behaviors, and all steps of the nursing process with emphasis on assessment of older adult clients. Students begin socialization

into the role of the Associate Degree Nurse as a member of an interdisciplinary healthcare team.

Prerequisite(s): Admission to the AS Nursing Program, BSC 1085C, ENC 1101, (MAC 1105 OR STA 2023)

Corequisite(s): NUR 1021L

Prereq/Corequisites: BSC 1086C, HUN 2201

Special Nursing Program policies may apply to this course.

NUR 1021L - Nursing Process I Clinical Experience

4 Credit Hours
(Fall, Spring)

This course introduces students to the role of the Associate Degree Nurse in providing direct, holistic nursing care to young, middle-aged and older adults who are hospitalized or in community settings. Students are introduced to all steps of the nursing process with a focus on assessment skills. Students will identify self-learning needs and set their own goals for improvement. Critical thinking and working effectively with peers and other healthcare professionals as a team member is expected. The demonstration of caring behaviors and therapeutic communication as a provider of bedside, technical nursing care is emphasized. Students must demonstrate safe performance of basic nursing skills, including but not limited to medication administration, physical assessment, and comfort care.

Prerequisite(s): Admission to the AS Nursing Program

Corequisite(s): NUR 1021C.

Special Nursing Program policies may apply to this course.

NUR 1141 - Pharmacologic Principles in Nursing I

1 Credit Hour
(Fall, Spring)

This course introduces students to concepts and principles of pharmacology related to safe administration of therapeutic agents within the nursing process framework. Students begin to learn major drug classifications and selected exemplars along with principles of safe, effective administration of drugs. Students will learn dosage calculations, factors that affect the absorption, excretion, distribution, and metabolism of drugs, as well as drug actions, adverse effects, and interactions.

Prerequisite(s): Admission to the AS Nursing Program

Special Nursing Program policies may apply to this course.

NUR 1142 - Pharmacologic Principles in Nursing II

1 Credit Hour
(Fall, Spring)

An introduction to the role of the associate degree nurse in providing direct, holistic nursing care to young, middle-aged and elderly adults who are hospitalized or receiving care in community settings. Emphasis is on applying all steps of the nursing process with focus on assessment skills. Pre-requisite college foundation and nursing courses provide theoretical bases for nursing care. Critical thinking is an expected behavior along with skills in working

ethically and effectively with peers and other health care professionals as a team member; demonstrate caring behaviors and therapeutic communication with clients as a provider of bedside, technical nursing care. The student is expected to demonstrate safe performance of basic nursing skills, e.g., medication administration, physical assessment and comfort care of hospitalized adults and nursing home residents.

Prerequisite(s): NUR 1141 or LPN licensure and admission to the Nursing Program

Corequisite(s): NUR 1231C and NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 1231C - Nursing Process II

5 Credit Hours
(Fall, Spring)

Application of the nursing process continues with emphasis on the planning and implementation of nursing care for clients experiencing threats to functional health patterns. Development of professional behaviors, such as developing therapeutic relationships continues with students working clients through life interactions. Students further develop critical thinking skills through case studies and simulation scenarios designed to provide students with problem solving skills in analyzing, planning and prioritizing care for clients whose health problems are more acute or chronic; the client with psycho-emotional dysfunctions, dysfunctional support systems situations, grief, and loss. Students learn basic management skills as a team member caring for a limited number of clients in hospitals with emphasis on coordination of nursing care and discharge planning. Conflict management skills are highlighted as the student increases role as client advocate.

Prerequisite(s): NUR 1021L NUR 1021C and NUR 1141;or LPN licensure; admission to the AS Nursing Program or permission from the program director

Corequisite(s): NUR 1750L and NUR 1142

Prereq/Corequisites: DEP 2004

Special Nursing Program policies may apply to this course.

NUR 1750L - Nursing Process II - Clinical Experience

4 Credit Hours
(Fall, Spring)

This course builds on competencies presented in Nursing Process I regarding the role of the Associate Degree Nurse in providing direct, holistic nursing care for adult clients experiencing dysfunctional health patterns. Clinical experiences in hospitals, clinics, and community settings provide students with opportunities to apply the nursing process in care of clients, including the older adult. Students continue to develop management skills through conflict management and other professional behaviors. Students demonstrate safe performance of all basic and more complex nursing skills.

Prerequisite(s): NUR 1021L or LPN licensure

Corequisite(s): NUR 1231C.

Special Nursing Program policies may apply to this course.

NUR 1940L - Nursing Clinical Externship

3 Credit Hours
(Summer)

This elective course is designed to offer students the opportunity to gain additional clinical skills practice during the summer semester. Working with a preceptor and the nursing faculty in area hospitals, clinics, or community settings , the student will be able to perform all skills learned in successfully completed nursing courses.

Prerequisite(s): admission to the AS Nursing Program; NUR 1750L

Special Nursing Program policies may apply to this course.

NUR 2233C - Nursing Process III

6 Credit Hours
(Fall, Spring)

Students continue to use the nursing process and critical thinking with emphasis on primary and secondary prevention as nursing interventions in clients experiencing threats to functional health patterns, including during the childbearing process and children whose normal lines of defense have been invaded by stressors to the degree that hospitalization is necessary. Nursing practice issues continue to focus on ethical-legal issues related to acute and/or chronic illness and disability. Management skills include delegation and career development.

Prerequisite(s): NUR 1231C & NUR 1142 or approval from the program director.

Corequisite(s): NUR 2233L

Prereq/Corequisites: MCB 2010C

Special Nursing Program policies may apply to this course.

NUR 2233L - Nursing Process III – Clinical Experience

4 Credit Hours
(Fall, Spring)

Students continue to apply knowledge and skills learned in previous nursing courses in providing nursing care for the hospitalized child, the family during the maternity cycle, and adults whose health problems are more complex and/or chronic. Clinical sites include hospitals, health departments, clinics, physician offices, schools and other community settings. Conflict resolution skills are applied, as needed, to meet client and/or peer learning goals. Delegation skills with peers are also practiced. Students demonstrate continuation of all previously learned nursing skills and must perform safely all advanced nursing skills in this clinical course.

Prerequisite(s): NUR 1750L

Corequisite(s): NUR 2233C.

Special Nursing Program policies may apply to this course.

NUR 2241C - Nursing Process IV

5 Credit Hours
(Fall, Spring)

Students integrate knowledge and principles of the biophysical and psychosocial sciences to solve life-threatening problems that affect a limited number of critically ill clients in a variety of clinical settings. Students differentiate holistic nursing care therapies in primary, secondary and tertiary care settings. Students become proficient in applying all steps in the nursing process with emphasis on evaluating nursing care outcomes. Students apply critical thinking skills in exploring case-based practice situations and work together in simulation seminars to select effective client care improvement processes. Self-evaluation is part of the socialization process to prepare students for the work world as competent, caring staff nurses. Nursing practice issues include licensure standards and continued professional development.

Prerequisite(s): Permission from the Director of Nursing or NUR 2233C; MAC 1105 or STA 2023

Corequisite(s): NUR 2241L, NUR 2811L

Prereq/Corequisites: SYG 2000

Special Nursing program policies may apply to this course.

NUR 2241L - Nursing Process IV – Clinical Experience

3 Credit Hours
(Fall, Spring)

Students apply knowledge and principles of the biophysical and psychosocial sciences to assess, plan, implement and evaluate holistic nursing care of critically ill adults in hospitals, ambulatory care settings, and the home. Students will expand on management of care skills in preparation for their four-week clinical practicum prior to graduation from the program. Students will also shadow a home health/hospice nurse in observing treatment and palliative care of adults and children. Other clinical activities will include experiences in the emergency department and critical care units. Students must demonstrate competency in all behaviors required for an Associate Degree Nursing graduate.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2811L

Special Nursing Program policies may apply to this course.

NUR 2811L - Nursing Practicum

3 Credit Hours
(Fall, Spring)

This course is a capstone course and provides a time during the last four weeks of the nursing program in which students begin to transition from the student role into the graduate role as an associate degree nurse. Students attend seminar hours and complete standardized testing for evaluation in proficiency in applying all steps in the nursing process with emphasis on evaluating safe nursing care outcomes. Students complete clinical practice hours with an experienced registered nurse preceptor to provide holistic nursing care for a limited number of clients. The focus is on demonstration of all professional behaviors and competencies expected of the associate degree registered nurse graduate at entry level. Clinical experiences provide hands-on learning opportunities, enhancing clinical thinking, safe nursing judgment, and clinical confidence in skills. Clinical experiences take place in a variety of clinical settings and work schedules.

Prerequisite(s): NUR 2233L

Corequisite(s): NUR 2241C, NUR 2241L

Special Nursing Program policies may apply to this course.

NUR 2931 - Special Topics in Associate Degree Nursing

1 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2932 - Special Topics in Associate Degree Nursing

2 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2933 - Special Topics in Associate Degree Nursing

3 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2934 - Special Topics in Associate Degree Nursing

4 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

NUR 2935 - Special Topics in Associate Degree Nursing

5 Credit Hours
(Offered as needed)

Students work individually to enhance nursing knowledge and skills applicable to selected topics in Associate Degree Nursing. AD nursing competencies provide the framework for learning prescriptions which include critical thinking and problem-solving. Seminars, journals, CAI, written assignments and student – instructor conferences guide students in meeting course objectives. Flexible schedule.

Prerequisite(s): admission to the AS Nursing program; permission of Nursing program Director.

OCE 1001C - Oceanography

4 Credit Hours
(Fall, Spring)

A survey of the physics, chemistry, geology and biology of the oceans. Interrelationships between the atmosphere and oceans, methods of measurement and research, processes of coastal change and marine conservation. May be used to satisfy A.A. requirements in physical science for career goals other than the sciences, engineering, and pre-professional healthcare.

OCE 1013C - Aquatic Environmental Science

4 Credit Hours
(Offered as needed)

This course will investigate living and non-living components of aquatic ecosystems. Students will learn how aquatic ecosystems function naturally as well as how human activity can alter these ecosystems. The course is built around field trip(s) and lab work during which students will obtain water quality data from a local aquatic environment. Through field trip(s) and lab work, students will gain appreciation for the local relevance of course material. For both majors and non-majors, a key outcome of such experiences will be gaining experience in using inquiry and reasoning through the scientific method and becoming comfortable with data, technology, and instrumentation. Problem-solving, interpretation of data, and class discussions will be key.

OST 1107 - Word Processing I

3 Credit Hours
(Fall)

Integration of basic keyboarding and word processing – learning the keyboard, creating, editing, saving, and other word processing functions.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 1355 - Records Management

3 Credit Hours
(Spring)

Methods and systems of filing used in business offices, filing equipment, and time-and-motion skills. Filing practice sets are used.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2117 - Word Processing II

3 Credit Hours
(Spring)

Continuation of Typing and Word Processing I – develop keyboarding and document processing using a microcomputer.

Prerequisite(s): OST 1107 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

▲Technology-Across-the-Curriculum Course.

OST 2335 - Business Communications

3 Credit Hours
(Fall, Spring)

Business Communications is a comprehensive coverage of language structure and particular emphasis on writing superior business letters and reports. Instruction in principle, then illustration, and practice in applying the principles. A fundamental concept of the appearance, language and style, tone and psychology of effective business letters.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

OST 2401 - General Office Management

3 Credit Hours
(Spring)

Study of practices and procedures in the modern office. Emphasis on exercising judgment, handling incoming calls and callers, processing mail, word processing systems, editing and composing techniques, travel arrangements, banking procedures, employment applications and resumes.

Prerequisite(s): OST 2117 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PEL 1212A - Advanced Softball

1 Credit Hour
(Offered as needed)

Instruction, practice, and participation in advanced softball. The continuous development of physical skills is of major importance in this course.

PEL 1213 - Advanced Softball II

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Softball, which consists of instruction, practice, and participation in advanced softball. The continuous development of physical skills is of major importance in this course.

Prerequisite(s): PEL 1212A (Athletes)

PEL 1217A - Advanced Baseball

1 Credit Hour
(Offered as needed)

Instruction, practice, and participation in advanced baseball. The continuous development of physical skills is of major importance in this course.

PEL 1219 - Advanced Baseball II

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Baseball, which consists of instruction, practice, and participation in advanced baseball. The continuous development of physical skills is of major importance in this course.

Prerequisite(s): PEL 1217A (Athletes)

PEL 1624M - Advanced Basketball (Men)

1 Credit Hour
(Offered as needed)

This course is a high intensity, drill-oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

PEL 1624W - Advanced Basketball (Women)

1 Credit Hour
(Offered as needed)

This course is a high intensity, drill oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including: rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

PEL 1626M - Advanced Basketball II (Men)

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Basketball for Men, which consists of a high intensity, drill -oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

Prerequisite(s): PEL 1624M (Athletes)

PEL 1626W - Advanced Basketball II (Women)

1 Credit Hour
(Offered as needed)

This course is a continuation of Advanced Basketball for Women, which consists of a high intensity, drill -oriented program designed to increase the knowledge, skill ability, and endurance levels of individuals interested in basketball. Instruction includes various aspects of the game of basketball including rules and regulations, basic fundamentals, offensive set, defensive sets, and scouting procedures. Instruction will be given through classroom lectures, as well as on-the-court lectures and activities. It is strongly recommended that students participate in an exercise program outside of class hours. It may be recommended and in some cases required that the student obtain medical approval before participating in this course.

Prerequisite(s): PEL 1624W (Athletes)

PEM 1131A - Strength Training

3 Credit Hours
(Offered as needed)

This course is a high intensity lecture/demonstration and flexible lab hour weight training program designed to increase the size, strength, and endurance of the skeletal muscle system. Instruction includes, but is not limited to, weight training safety, etiquette, history, and nutrition. Instruction will be given in the design of progressive resistance programs to increase total body efficiency and to meet the objectives of the individual student. Students are responsible for determining fitness for training, and those with medical problems which restrict personal activities are encouraged to obtain medical clearance before enrolling in the course.

PEM 2108 - Fitness Lab

1 Credit Hour
(Offered as needed)

Instruction and participation in an exercise program with emphasis on muscle endurance, strength and flexibility.

Prerequisite(s): HLP 1081 or approved wellness assessment by the department chair.

This course may be taken up to four times for credit.

PEO 2004 - Theory and Practice of Teaching a Specific Sport

3 Credit Hours
(Offered as needed)

This course is designed to provide knowledge of the rules, teaching progressions and strategies for competition. The course includes acceptable behavior and ethics for coaches. This course will be offered for the following specific sports: baseball/softball, basketball, football, golf, soccer, swimming, tennis, track and field/cross country, volleyball and wrestling.

PEO 2005 - Coaching Theory

3 Credit Hours
(Offered as needed)

This course is designed to provide knowledge of the characteristics, principles, ethics, and theories related to coaching sports in educational and recreational settings. Emphasis is placed on preparing coaches to train athletes to achieve optimal levels of performance.

PET 1000 - Introduction to Physical Education

3 Credit Hours
(Offered as needed)

A study of the history of physical education and sport with particular emphasis placed on present practices and trends.

PET 2622 - Care and Prevention of Athletic Injuries

3 Credit Hours
(Offered as needed)

Designed to provide students with a basic knowledge of the care, prevention, and rehabilitation of injuries received during participation in physical education activities to include the effects and dangers of drug use including performance enhancing drugs.

PGY 1220C - Commercial Photography I

4 Credit Hours
(Offered as needed)

A beginning course that introduces students to the procedures and aesthetics of developing photographic illustrations for industrial and advertising use. Students will gain experience using a high quality digital studio camera, electronic lighting, and digital applications of their work. It is recommended that students take PGY 1801C prior to or at the same time as this course.

PGY 1401C - Basic Photography

3 Credit Hours
(Fall, Spring)

A beginning course in black and white photographic and darkroom technique. Students will learn the functions of their camera and darkroom equipment. Students will apply their technical knowledge to various artistic challenges. Access to a 35mm camera with manual mode required.

PGY 1405C - Advanced Black and White Photography

3 Credit Hours
(Fall, Spring)

An advanced course in black and white photography. Students will be presented with more demanding creative challenges and will be exposed to a variety of advanced procedures in the darkroom. Access to a 35mm camera with manual mode required.

Prerequisite(s): PGY 1401C or equivalent.

PGY 1801C - Digital Photography I

4 Credit Hours
(Offered as needed)

A beginning course in photography with an emphasis on digital darkroom production techniques. Students will be exposed to procedures and aesthetic concerns relating to photography and digital image production. Access to an appropriate high-quality camera required.

▲Technology-Across-the-Curriculum Course.

PGY 2221C - Commercial Photography II

4 Credit Hours
(Offered as needed)

As advanced a course that allows the student to expand their skill set in producing photographic illustrations for industrial and advertising use. Students may explore product, portrait, and on-location commercial photographic projects.

Prerequisite(s): PGY 1220C and PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2802C - Digital Photography II

4 Credit Hours
(Offered as needed)

An intermediate-level photography course where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 1801C.

▲Technology-Across-the-Curriculum Course.

PGY 2804C - Digital Photography III

4 Credit Hours
(Offered as needed)

An advanced-level photography courses where creative idea generation and composition in photography are emphasized. Students research more deeply the history of photography and apply new skills to creative digital photographic work. Access to an appropriate high-quality camera required.

Prerequisite(s): PGY 2802C.

▲Technology-Across-the-Curriculum Course.

PHI 2010 - Introduction to Philosophy

3 Credit Hours ❖ † ♦ ¶
(Fall, Spring, Summer)

Central concepts of philosophy are developed, including a description of the main philosophical problems involved through ancient, medieval, and contemporary thought. This is a Writing-Across-the-Curriculum course and a Speaking-Across-the-Curriculum course requiring selected written and speaking assignments. If used to meet AA Gordon Rule requirements for general education, a minimum grade of "C" is required.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2600 - Introduction to Ethics

3 Credit Hours ❖ † ¶
(Fall, Spring, Summer)

Ways to frame and resolve ethical issues are studied. Major historical theories including consequentialism, deontology, and virtue ethics are presented in moral arguments and narratives. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

PHI 2930 - Philosophy – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

PHY 1020 - Physical Science

3 Credit Hours ♦
(Fall, Spring, Summer)

A one term course of lectures and demonstrations designed 1) to meet the general education requirements in physical science for non-science majors and 2) for students who need a preparatory course prior to taking physics. The course presents the fundamental classical and modern concepts of physics in the area of mechanics, energy, wave motion, electromagnetism, and atomic structure. Also topics in earth science and astronomy will be discussed.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1053C - General Physics Without Calculus I

4 Credit Hours ♦
(Fall)

This is the first course in a two-term sequence of non-calculus physics designed for biological science and pre-health profession majors. This course covers classical mechanics and thermodynamics. Entering students are assumed to have a serviceable knowledge of basic algebra and trigonometry. This course contains both lecture and laboratory components.

Prerequisite(s): MAC 1114 or equivalent

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 1054C - General Physics Without Calculus II

4 Credit Hours
(Spring)

This is the second course in a two-term sequence of non-calculus physics designed for biological science and pre-

health profession majors. This course covers the areas of electricity, magnetism, light, quantum theory, atomic and nuclear structure, and elementary particles. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 1053C or equivalent.

PHY 2048C - General Physics With Calculus I

4 Credit Hours ♦
(Fall, Spring, Summer)

This is the first course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers classical mechanics (statics and dynamics of point-masses), rigid-body dynamics, oscillations, and waves. Additional topics, such as fluids or the special theory of relativity, may be covered if time permits. This course contains both lecture and laboratory components.

Prereq/Corequisites: MAC 2311.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

PHY 2049C - General Physics with Calculus II

4 Credit Hours
(Spring, Summer)

This is the second course in a two-term sequence of calculus-based physics designed for engineering and physical science majors. This course covers electrostatics, magnetostatics, electromagnetic fields and waves, direct-current circuits, alternating-current circuits, and optics. This course contains both lecture and laboratory components.

Prerequisite(s): PHY 2048C

Prereq/Corequisites: MAC 2312 or equivalent

In special circumstances, PHY 2048C and PHY 2049C can be taken out of sequence with instructor approval.

PLA 1003 - Introduction to Paralegal Studies

3 Credit Hours
(Fall)

This course is designed to give students a broad understanding of the nature of the paralegal profession and the elements contained within the profession, as well as its responsibility.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1005 - Legal Terminology

3 Credit Hours
(Offered as Needed)

This course is designed to give an explanation of the common legal vocabulary involved in the broad, general principles of substantive and common law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1013 - Introduction to the Legal System

3 Credit Hours
(Offered as Needed)

A practical introduction to the US legal system, types and sources of law, the courts, and related topics; a beginning course for students seeking careers in legal secretary technology or legal assisting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1114 - Legal Research and Writing

3 Credit Hours
(Spring)

This course is designed to provide the student with necessary skills and knowledge required in legal research/case analysis and legal writing.

Prerequisite(s): PLA 1003 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1203 - Civil Procedure

3 Credit Hours
(Spring)

This course provides an insight into the system of dispute resolution for private parties and the government provided by the court systems of the various states and the federal government in a non-criminal setting.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1600 - Wills, Trusts, and Probate

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of estate planning, wills, and probate administration.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 1800 - Introduction to Family Law

3 Credit Hours
(Spring)

An introduction to practices as they relate to family law.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2273 - Tort Law

3 Credit Hours
(Fall)

This course is designed to provide the student with an introductory knowledge of tort law with objectives centered on personal injury torts.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

PLA 2949 - Internship - Paralegal

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): completion of a minimum of 12 credit hours in the appropriate discipline, including PLA 1003 and permission of the instructor is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

*This college credit course is not intended for transfer and may not be applied toward the AA degree.

PMT 1203C - Introduction to Machining

3 Credit Hours
(Fall, Spring, Summer)

This course introduces the student to basic mechanic fundamentals. Instructional topics will include hand tool identification and application, power tool identification and application and shop safety.

PMT 1250C - Introduction to CNC Machining

3 Credit Hours
(Fall, Spring, Summer)

The history and development of CNC (computer numerical control). Programming methods are reviewed with the emphasis of skills placed on programming, milling, drilling and turning with M and G code preparation. Manual and computer assisted programming are also reviewed. Students will program, set up and operate full size CNC machines found in our manufacturing lab. Projects will be assigned to students with an expectation of performing these tasks on manufacturing equipment.

PMT 2213C - Machining I

3 Credit Hours
(Fall, Spring, Summer)

In this course students will continue to develop basic machining skills and better utilize machine tool accessories to assist in different machining operations to include: Set up and utilize machine tool accessories, Vertical knee milling operation, manual lathe operations, manual lathe threading and drill press operations.

Prerequisite(s): PMT 1203C and ETD 2218 or equivalent experience

PMT 2261C - CNC Machining I

3 Credit Hours
(Fall, Spring, Summer)

This course provides training in CNC machine operation and programming. The student will gain technical knowledge and programming methods employed in CNC machining centers. CNC Machine programming, set-up and operations are taught using computer and hands on applications. Metal fabrication processes are taught through lectures, demonstration and student generated projects. Completion of this course offers students technical skills as a CNC operator processes to be applied in various machining and fabrication industries. MasterCam–Lathe is taught to provide the student programming application in CNC machining.

Prerequisite(s): PMT 1250C or equivalent experience.

PMT 2262C - CNC Machining II

3 Credit Hours
(Fall, Spring, Summer)

This course will offer students a working knowledge of MasterCam Mill 2-D and Solidworks. This is the second class offered which teaches the student 3-D design using solidworks. An in-depth study of CAD/CAM software, CNC processing methods and the set-up of CNC machining centers. The course lectures and lab offer students hands-on applications using Solidworks generated projects processed with Mastercam tool path software to generate various projects. The student will also learn to calculate machining feeds and Speeds, edit CNC programs and part production for Mill and Lathe.

Prerequisite(s): PMT 2261C or eqivalent experience.

POS 1041 - American Government

3 Credit Hours ♦ ¶
(Fall, Spring, Summer)

Examines government, political ideals, and institutions. Strong emphasis is placed on political thought, the origin of the American federal system, and the distribution of powers between state and national governments. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

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¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

POT 1002 - History and Ideas of Political Science

3 Credit Hours ❖
(Offered as needed)

This course reviews classical ideas, political theory and institutions from a historical and comparative viewpoint. It examines the rise of the State, its organization, economic systems, the use of force, and persuasion. This course qualifies as having an international and/or diversity focus for Teacher Education programs common prerequisites.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

PSC 2905 - Independent Study – Physical Science

1 Credit Hour
(Fall, Spring, Summer)

Directed study and individual projects designed to meet the needs of students interested in a specialized area of the physical sciences for which present course availability is limited. Meets specific general education requirements.

This course may be taken up to four times for credit.

PSY 2012 - Psychology

3 Credit Hours ♦
(Fall, Spring, Summer)

Surveys of the various fields of psychology. Understanding human behavior by studying the adaptation of the individual to the physical and social environment.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

REA 1205 - Reading Across the Genres I

3 Credit Hours
(Offered as needed)

This college-level reading course employs a variety of literary genres as the source material for building student skills in comprehension, context clues, reading speed, critical analysis, vocabulary, and other related reading skills. Students will be exposed to numerous styles and levels of reading material including novels, short stories, critical essays, drama, news reporting. Students will also develop a personal reading preference profile and learn how to identify books, magazines and other reading material commensurate with that profile.

Prerequisite(s): PERT placement score of 106 or higher.

REL 2300 - Introduction to World Religions

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

This course will explore the principles and practices of the world's major religious traditions. The religions will be studied in their historical and contemporary forms. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

REL 2930 - Religion – Special Topics

3 Credit Hours
(Offered as needed)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

RTE 1000 - Introduction to Radiologic Technology

2 Credit Hours
(Summer, Offered as needed)

This course is designed to provide an overview of the history of radiography and the role and scope of practice of the practitioner in the healthcare delivery system. Organizations, accreditation, federal agencies, regulatory agencies (including OSHA) and professional credentialing will be discussed. Content includes a fundamental background in medical law, ethics, human diversity and patient consent. The student will examine a variety of ethical issues and dilemmas found in clinical practice, as well as developing a better understanding of patients, the patient's families, and professional peers through comparison of diverse populations based on value systems, cultural and ethnic influences, communication styles and socioeconomic influences. Radiographic medical terminology and pharmacology will be covered. Site specific clinical education paperwork will be completed and students will perform required clinical observations in imaging departments. Background check, drug screening, training and clinical site approval mandatory.

Prerequisite(s): admission to the Radiography Program.

RTE 1111 - Introduction to Radiographic Patient Care

2 Credit Hours
(Fall)

This course is designed to prepare radiography students to provide basic patient care. Basic concepts of patient care will be described, as well as infection control procedures and standard precautions. This course includes hospital specific training. Health risks, life stages, HIV/AIDs and domestic violence will be discussed. This course also includes an introduction to medical and radiographic terminology. Topics include vital signs, venipuncture, body mechanics and transport, verbal/nonverbal communication, and some pharmacology.

Prerequisite(s): admission to the Radiography Program.

RTE 1418 - Radiographic Techniques I

3 Credit Hours
(Fall)

This course is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. This course introduces the student to a comprehensive study and theory of the production of x-rays and primary exposure factors of radiographic imaging. The image parameters of density, contrast, recorded detail, image distortion and blur will be studied as well as ancillary devices and equipment required to produce a quality radiographic image. Digital imaging with related accessories will be emphasized. Class demonstrations and exercises are used to demonstrate application of theory.

Prerequisite(s): MAC 1105 or other Gordon Rule math course and admission to the Radiography Program.

RTE 1457C - Radiographic Techniques II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1418 Radiographic Techniques I. Course content includes the basics of magnetism, electricity, motors, generators, rectifying systems, x-ray tube and filament circuitry. Topics in electromagnetism such as self and mutual induction, high voltage transformation, and AC rectification will be emphasized. An introduction of special radiographic methods will include automatic exposure control, computers, fluoroscopy and image intensification, subtraction radiography, conventional tomography, digital image receptors, and digital image acquisition and manipulation.

Prerequisite(s): RTE 1418.

Corequisite(s): RTE 1513C

RTE 1503C - Radiographic Procedures I

4 Credit Hours
(Fall)

This course is designed to provide the Radiography student with instruction in radiographic examinations of the chest, abdomen, upper extremity and lower extremity. An introduction to medical and radiographic terminology, radiographic anatomy, and image critique are also included.

Prerequisite(s): BSC 1085C and admission to the Radiography program.

RTE 1513C - Radiographic Procedures II

4 Credit Hours
(Spring)

This course is a continuation of RTE 1503C. It is designed to provide the student with instruction in radiographic procedures and anatomy in the distal extremities, hip region, spine, ribs, and sternum and the cranium. Critical thinking, medical and radiographic terminology, as well as image critique are emphasized.

Prerequisite(s): RTE 1503C, RTE 1804L , and BSC 1086C

Corequisite(s): RTE 1814L.

RTE 1804L - Radiography Clinical Education I

3 Credit Hours
(Fall)

This course involves the practical application of the theories covered in RTE 1503C and RTE 1000. Rotations provide experience with various imaging systems, protocols, and patient care. Students observe, assist and perform basic radiographic procedures (chest, abdomen and extremities) under direct supervision. This course emphasizes patient care and critical thinking. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1000

Corequisite(s): RTE 1503C

RTE 1814L - Radiography Clinical Education II

3 Credit Hours
(Spring)

This course is a continuation of Radiography Clinical Education I. This clinical training emphasizes lower and upper extremity. Medical and radiographic terminology, patient care, critical thinking and communication skills are emphasized. This course meets at the affiliate hospitals. Uniforms, name badges and radiographic markers required.

Prerequisite(s): RTE 1804L

Corequisite(s): RTE 1513C.

RTE 1824L - Radiography Clinical Education III

4 Credit Hours
(Summer)

This course is a continuation of Radiography Clinical Education II. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I and II. The student will gain experience and develop clinical competence in general radiographic procedures such as the cranium and specialized contrast studies. Advanced patient care skills, critical thinking, imaging and exposure techniques, radiation protection application and image processing will be emphasized. This rotation covers clinical experience in all phases of fundamental radiologic procedures and image critique. Students will rotate through ancillary departments in this course.

Prerequisite(s): RTE 1814L

Corequisite(s): RTE 2523C.

RTE 2061 - Radiographic Preparation for Practice

4 Credit Hours
(Spring)

This course is designed review information in preparation for the student to take the American Registry of Radiologic Technologist (ARRT) registry examination. The course will cover patient care and education, image production, equipment operation and maintenance, radiographic procedures and radiation protection. The student will also be given simulated registry examinations for practice and assessment purposes.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2854L.

RTE 2385 - Radiographic Protection and Biology

3 Credit Hours
(Fall)

This course is designed to provide the student with an overview of the principles of interaction of ionizing radiation with living systems. Ionizing effects on molecules, cells, tissues and the body as a whole are presented, along with factors affecting biological response, including; acute, chronic, stochastic and non-stochastic effects. This course is also designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and healthcare organizations are incorporated, as are the various methods of monitoring radiation exposure and acceptable dose limit values.

Prerequisite(s): RTE 1000, RTE 1418, RTE 1457C, RTE 2523C

Corequisite(s): RTE 2844L.

RTE 2473 - Radiographic Quality Assurance

2 Credit Hours
(Fall)

This course is designed to introduce the radiography student to evaluation methodology of radiographic systems to assure consistency in the production of quality images. Image critique, fluoroscopy, malfunctions, and specifications are some of the topics covered in the course.

Prerequisite(s): RTE 1418, RTE 1457C

Corequisite(s): RTE 2844L.

RTE 2523C - Radiographic Procedures III

3 Credit Hours
(Summer)

This course is a continuation of RTE 1513C covering cranium procedures and positioning. It is designed to provide the student with instruction in more complex radiographic procedures such as fluoroscopy, urinary studies, bone age, trauma, pediatrics, mobile and surgical radiography. Included is instruction in additional modalities and studies such as CT, MRI, arthography, myelography, and vascular studies. Attention will be given to the specialized equipment, contrast media, critical thinking and techniques necessary to perform these procedures. Radiographic anatomy, pathology, and critique of images are included in this course.

Prerequisite(s): RTE 1513C

Corequisite(s): RTE 1824L.

RTE 2533C - Radiographic Procedures IV

2 Credit Hours
(Fall)

This is a continuation of RTE 2523C, with emphasis on special procedures and additional modalities. Students are required to complete observations hours within specialty areas.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L

RTE 2571 - Introduction to Computed Tomography

1 Credit Hour
(Spring)

This course is designed to provide entry-level radiography students with an introduction to and basic understanding of the operation of a computed tomography (CT) device. Content is not intended to result in clinical competency.

Prerequisite(s): RTE 1457C

RTE 2782 - Radiographic Pathology

3 Credit Hours
(Spring)

This course is designed to introduce theories of disease causation and the pathophysiologic disorder that compromise healthy persons. Etiology, pathophysiologic responses, clinical manifestations, and radiographic appearance of alterations in body systems will be presented. Emphasis will be placed on pathological findings on diagnostic radiographic images.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2854L.

RTE 2844L - Radiography Clinical Education IV

5 Credit Hours
(Fall)

This course is a continuation of RTE 1824L. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I, II and III. The student will gain experience and develop clinical competence in specialized imaging procedures, and mobile, surgical and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 1824L

Corequisite(s): RTE 2385.

RTE 2854L - Radiography Clinical Education V

5 Credit Hours
(Spring)

This course is a continuation of RTE 2844L. The terminal objective for this course is to prepare the student for employment as an entry level technologist. The student is expected to continue to refine those skills related to objectives listed in Clinical Practicum's I-IV and trauma radiography. Advanced imaging skills and exposure techniques will continue to be provided. Rotations through ancillary areas continue.

Prerequisite(s): RTE 2844L

Corequisite(s): RTE 2061.

RTE 2910 - Radiographic Evidence Based Practice

1 Credit Hour
(Fall)

This course is designed to develop the student's research, writing and oral presentation skills; while completing assignments, both independently and collaboratively, with minimal direction and supervision. Methods of research, appropriate style of writing, citing work, and using APA format will be covered.

Prerequisite(s): RTE 2523C

Corequisite(s): RTE 2844L.

♦This college credit course may not be applied toward the A.A. degree and normally is not intended for transfer unless the student transfers to a baccalaureate in radiologic sciences degree program that is specified under the Florida Statewide AS to BS Articulation Agreement.

SBM 2000 - Small Business Management

3 Credit Hours
(Spring)

This course provides students the opportunity to learn hands-on technical applications regarding entrepreneurship. It is designed for the student who is interested in the ownership and management of a small business enterprise.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

SLS 1101 - College Success

3 Credit Hours
(Fall, Spring, Summer)

A course designed to focus on developing practical study skills to enhance academic success. Skills taught in this course are time management, concentration/memorization, listening, note taking, test taking, use of college resources, establishing goals, identifying learning styles, developing career choices and learning to cope with personal issues that face many college students.

SLS 1201 - Service Learning Seminar

1 Credit Hour
(Offered as needed)

A seminar course designed to enhance and reinforce the value of civic responsibility and to provide students with a community service program opportunity by volunteering in community agencies in the public and private sectors.

SLS 2505 - Critical Thinking

3 Credit Hours
(Fall, Spring)

This course is designed to teach students to become critical thinkers and to show students how to apply their thinking skills to everyday problems and issues in college, career, and personal settings. Based on discussions of timely issues, students will learn to use critical thinking.

SPC 1006 - Essentials of Speech

1 Credit Hour †
(Offered as needed)

This course can be used to satisfy missing transfer requirements and/or oral components required in certain programs. Individuals participate in the preparation and presentation of speeches.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 1608 - Public Speaking

3 Credit Hours †
(Fall, Spring, Summer)

Emphasis is on assisting the individual to develop his/her potential in oral communication. Individual participation in preparation and presentation of speeches reinforced by continuing group analysis and constructive criticism.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPC 2300 - Interpersonal Communication

3 Credit Hours †
(Fall, Spring)

This course studies the speech communication principles involved in one-to-one interaction, comprehensive listening, conflict resolution, family and group communication and intrapersonal thought. Learning techniques may include small group participation, role play, as well as formal and informal presentations.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.

SPN 1120 - Spanish I

4 Credit Hours ❖
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading, and writing. Covers all basic structures of the language.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.

SPN 1121 - Spanish II

4 Credit Hours
(Fall, Spring, Summer)

Pronunciation and grammatical structures of Spanish, with emphasis upon balanced development of all four skills – listening, speaking, reading and writing. Covers all basic structures of the language.

Prerequisite(s): SPN 1120 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2220 - Spanish III

4 Credit Hours
(Offered as needed)

Intermediate level review of grammar, readings in Spanish Literature, and development of conversational and writing skills.

Prerequisite(s): SPN 1121 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

SPN 2221 - Spanish IV

4 Credit Hours
(Offered as needed)

Completion of intermediate level review of grammar, readings in Spanish literature, and development of conversational and writing skills.

Prerequisite(s):
SPN 2220 or an equivalent course with a grade of “C” or better.

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

STA 2023 - Statistics

3 Credit Hours ♦
(Fall, Spring, Summer)

This course provides a general introduction to understanding and applying statistical terms and concepts. Topics include the following: descriptive statistics, probability, random variables, discrete and continuous probability distributions, sampling distributions, confidence interval estimation, hypothesis testing, two sample inferences, correlation, and simple linear regression. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): completion of MAT 1033A or equivalent with a "C" or better, or appropriate placement score.

♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

STA 2122 - Statistical Applications

4 Credit Hours
(Offered as needed)

This course is designed for students pursuing psychology, education, and some specialized degrees. The course is an introduction to understanding and applying statistical concepts. Topics include: descriptive statistics, probability distributions, one and two sample hypothesis testing, confidence interval estimation, correlation, regression, and analysis of variance. Non-symbolic graphing calculators are required. The TI-83/84 Series is recommended. A minimum grade of “C” is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): MAT 1033A or equivalent with a “C” or better, or appropriate placement score.

SYG 2000 - Sociology

3 Credit Hours ❖ ♦
(Fall, Spring, Summer)

An introduction to the basic theories, concepts, and descriptions of individuals, groups, and societal behaviors. Basic themes include an overview of culture, socialization, deviance, and social institutions, with an emphasis on the dynamics of families, government, and economic influences.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

SYG 2010 - Social Problems

3 Credit Hours ❖ ¶
(Fall, Spring, Summer)

Introduction to the sociological study of the nature of social problems to insure understanding of their impact on the individual, the group and social institutions in societal and cultural settings. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

SYG 2430 - The Family and Society

3 Credit Hours
(Fall, Spring, Summer)

An examination of the problems which arise out of participation in marriage, family and community situations. Designed to provide students with a basic understanding of the dynamics of family interaction, the effects upon the children, and the family's relationship to and participation in the community.

TAR 2121C - Architectural Drafting

3 Credit Hours
(Offered as needed)

Architectural design and development of residential and light commercial buildings to include: development and construction of good architectural freehand lettering, VA and FHA approved residential house plans, “Good Sense” house plans as defined in the Arkansas Plan, and heat loss/heat gain calculations.

Prerequisite(s): ETD 1102 or ETD 1112 or equivalent.

TAX 2000 - Federal Income Tax: Individual

3 Credit Hours
(Spring)

Federal Income Taxes. Determine income tax for individuals, interpretations of Internal Revenue Code and Regulation, tax planning and advisory service. Brief introduction to partnership, corporation, estate and gift taxes. Extensive practice problems in individual income tax returns and research in tax questions.

Prerequisite(s): MTB 1103 is required and knowledge of basic computer and keyboarding skills are strongly recommended.

THE 1905A - Independent Study – Theater

1 Credit Hour
(Offered as needed)

A defined independent study which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule. Departmental approval required. Placement test is required. The course includes Writing-Across-The-Curriculum. If used to meet Gordon Rule requirements for general education, a minimum grade of "C" is also required.

Prerequisite(s): Approval from department chair, a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

THE 2000 - Theatre Appreciation

3 Credit Hours † ♦ ¶
(Fall, Spring, Summer)

An introduction to theater and theatrical production. Topics span a wide range of interest – critical, historical, aesthetic and practical – intended to lay a foundation for further knowledge and skill of the theater. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education. This course contains an oral communication component and may be used to satisfy the Speaking-Across-the- Curriculum requirement.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
♦ Courses listed with this symbol are Florida State Core Courses and are protected in transfer to other public state institutions as meeting the state **Core General Education** requirements.

¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2071 - Humanities – Cinema Appreciation

3 Credit Hours † ¶
(Fall, Spring, Summer)

An introduction to the origin, development, cultural aspects and analysis of cinema topics. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communication/verbal/reading achievement or successful completion of ENC 0025 and REA 0017.

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2300 - Dramatic Literature

3 Credit Hours † ¶
(Fall, Spring)

Survey of dramatic works from the Greeks to the 20th century, with emphasis on the plays of the 19th and 20th centuries; intensive investigation and script analysis with reports, lectures and discussions. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): ENC 1101

† Courses listed with this symbol address NWFSC's **Speaking-Across-the Curriculum** student learning outcome, namely that all associate degree graduates are competent in basic public speaking skills.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

THE 2304 - Script Analysis

3 Credit Hours
(Offered as Needed)

An introduction to the examination and analysis of play scripts as preparation for production. Students will read plays from various periods and genres, and analyze such dramatic elements as plot, theme, character, dialogue, and style.

THE 2820 - Musical Theater Workshop

3 Credit Hours
(Summer)

An introduction to creative dramatics and children's theater. Topics span a wide range of interests; creative experience, children and theater, workshop procedure, script selection, rehearsal and performance.

THE 2821 - Musical Theater Workshop II

3 Credit Hours
(Summer)

Creative dramatics introduces the many elements of theater: dance, voice and musical theater. Topics span a wide range of interests: the creative process, workshop procedures, rehearsal and performance. Creative Dramatics will

focus on producing a final performance.

Prerequisite(s): THE 2820.

THE 2930 - Theater – Special Topics

3 Credit Hours
(Fall, Spring)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

TPA 1210 - Stagecraft

3 Credit Hours
(Fall)

This course is an introduction to the principles of stagecraft: stage terminology, stage safety, instruction in proper use of shop tools, basic theater construction methods, understanding of theatrical rigging, and understanding of general background practices.

TPA 1290 - Technical Theatre Lab I

1 Credit Hour
(Offered as Needed)

This course is designed to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

TPA 1291 - Technical Theatre Lab II

1 Credit Hour
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1290

TPA 1940 - Internship in Theatre Design or Production

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the technical theatre field.

TPA 2063 - Principles of Scenic Design

3 Credit Hours
(Offered as Needed)

This course is a detailed introduction to the principles and techniques used in scene design. The course will include the discussion and practice in analyzing scripts, visualizing a design concept, drafting, paint elevations and rendering and/or modeling techniques.

Prerequisite(s): TPA 2343

TPA 2170 - Introduction to Theatre Production Documentation

3 Credit Hours
(Offered as Needed)

This course is an introduction to the presentation of information necessary to document the design and production process.

TPA 2212 - Sound Production for the Stage

3 Credit Hours
(Offered as Needed)

This course is an introduction to audio production and reinforcement for the stage. Students will learn how to use and maintain equipment, record and edit sound effects, and mixing live sound. Emphasis will be placed on digital audio techniques and equipment.

TPA 2220 - Lighting Design

3 Credit Hours
(Spring)

An introduction to stage lighting. Topics include history of stage lighting, fundamentals of light and illumination, lighting control, and lighting practices.

Corequisite(s): TPA 1210

TPA 2232 - Introduction to Costuming Technology

3 Credit Hours
(Fall, Spring)

An introduction to costume techniques and wardrobe practices. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in theater costumes.

TPA 2276C - Entertainment Technology - Crafts

3 Credit Hours
(Spring)

This course presents the practices and principles of advanced woodworking, welding, smithing, casting, ceramics, plaster work, fiberglass and plastic technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented that will use items created in a realized production.

Prerequisite(s): TPA 1210.

TPA 2292 - Technical Theatre Lab III

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 1291

TPA 2301 - Technical Theatre Lab IV

2 Credit Hours
(Offered as Needed)

This course is designed to continue to complement other technical theatre courses by giving the student the opportunity for hands-on interaction in a structured lab setting. Students will be assigned duties appropriate for their skills that will synthesize the classroom experience.

Prerequisite(s): TPA 2292

TPA 2331 - Costume Construction

3 Credit Hours
(Offered as needed)

An introduction to costume construction techniques and wardrobe design. Topics span a wide range: costume construction techniques, problems in costumes, costume history, construction styles, sewing machine practices, seam finishes, flat pattern layout and production techniques. This course is intended to develop practical experiences in costume construction.

Prerequisite(s): TPA 2232

TPA 2343 - CAD for the Theatre

3 Credit Hours
(Offered as Needed)

This course is project oriented covering fundamental through advanced material in computer aided drafting and design and its application for the theatre.

TPA 2600 - Stage Management

3 Credit Hours
(Offered as needed)

This course is an introduction to the study and application of stage management as it relates to the manager portfolio, the stage manager morgue, rules and regulations relating to I.A.T.S.E., rules related to contracts, competence in stage management, proper communication with directors, technical directors, designers, cast members and crews, competence in technical discussion areas and basic first aid.

TPP 1190 - Rehearsal and Performance I

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): experience in high school or a desire to learn.

TPP 1191 - Rehearsal and Performance II

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1190.

TPP 1192 - Rehearsal and Performance III

3 Credit Hours
(Fall, Spring, Summer)

An ensemble theater performance experience open to any student who wishes to develop rehearsal and performance skills. Students must participate in scheduled rehearsals and performances.

Prerequisite(s): TPP 1191.

TPP 1940 - Internship in Theatre Performance

3 Credit Hours
(Offered as Needed)

The emphasis of this course is on applied learning and vocational experience in the theatre performance field.

TPP 2110 - Acting I

3 Credit Hours
(Fall, Spring)

Through in-class performance the student will develop an understanding and proficiency of those skills of movement, voice, and expression which are required of a theatrical performer.

TPP 2111 - Acting II

3 Credit Hours
(Fall, Spring)

Through in-class performance, the student develops an understanding and proficiency in styles of acting from classic through modern.

Prerequisite(s): TPP 2110.

TPP 2120 - Improvisation

3 Credit Hours
Offered as needed

This course explores the use of creativity and imagination, engaging the actor in a wide variety of improvisational theatre games.

TPP 2141 - Acting in Shakespeare

3 Credit Hours
(Offered as needed)

This course is an introduction to the concepts, principles, and skills needed to develop characters in Shakespeare's plays. The course focuses on the hidden clues in the text to discover character choices and meaning. Specific analysis and the techniques of scansion are introduced as they relate to character interpretation. Application of these techniques will be presented in scenes and monologues.

TPP 2150 - Advanced Scene Study

3 Credit Hours
(Fall)

This course is a continuation of the processes and concepts of TPP 2111, Acting II, with the addition of new techniques to create dynamic and engaging characterizations through performance.

TPP 2220 - Auditioning

3 Credit Hours
(Offered as Needed)

This course explores audition techniques for the stage. Students will be better prepared to audition in professional settings.

TPP 2250 - Introduction to Musical Theatre

3 Credit Hours
(Fall)

Introduction to the study of Musical Theater analysis, creation, and performance with an emphasis on singing, dancing, and acting.

TPP 2301 - Directing I

3 Credit Hours
(Offered as needed)

A beginning course in the study, development and training in directing for the theater. Although not a prerequisite, students are encouraged to take Acting I and II before Directing I.

TPP 2302 - Directing II

3 Credit Hours
(Offered as needed)

Directing II is a continued study of the basic principles of directing for the theater with emphasis in the continued study, development and training in directing for the theater.

Prerequisite(s): TPP 2301.

TPP 2533 - Stage Combat I (Unarmed & Rapier)

3 Credit Hours
(Spring)

Through in-class study and performance the student will develop an understanding of and proficiency in the safe techniques of unarmed and rapier stage combat which are required of a theatrical performer. Application of these techniques will be presented in two scenes, one for unarmed and one for rapier.

TPP 2930 - Theater Performance – Special Topics

3 Credit Hours
(Fall, Spring, Summer)

A defined special topics course which is pursued under supervision of a faculty member and recorded through usual departmental procedures. Designed to permit a student to pursue non-scheduled academic and laboratory work which may be of a specialized nature and not available through the college schedule.

This course may be taken up to four times for credit.

WOH 1012 - World Civilization I

3 Credit Hours ❖ ¶
(Fall)

A study of world history from 4000 BC to 1650 AD as it relates to the development of western civilization. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum

grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ Courses listed with this symbol have an **international and/or diversity focus** and meet Teacher Education Programs' common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

WOH 1022 - World Civilization II

3 Credit Hours ❖ ¶
(Spring)

A study of history from 1650 AD to the present as it relates to the development of the modern world. History is analyzed in terms of social, religious, philosophical, political, and economic concepts rather than chronological facts. This is a Gordon Rule writing course and is part of the college's Writing-Across-the-Curriculum program. A minimum grade of "C" is required if used to meet Gordon Rule requirements for general education.

Prerequisite(s): a passing score on the standardized placement test measuring communications/verbal/reading achievement, successful completion of any required developmental English and Reading coursework with a grade of "C" or better, or exemption from placement testing.

❖ This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.
¶ Courses listed with this symbol meet **writing requirements** outlined in FAC Rule 6A-10.030 and require a minimum grade of "C" when used for General Education credit.

ZOO 1010C - Zoology

4 Credit Hours
(Offered as needed)

An introduction to the major concepts of animal life, to include the structure, taxonomy, evolutionary relationships, and natural history of the major animal groups.

Upper Division College Credit Courses

Upper Division College Credit Courses

ACG 3083 - Accounting: Concepts and Practice

3 Credit Hours
(Fall, Spring)

This course explores the preparation and use of accounting information. Topics include mathematical procedures related to business decisions; terms and processes associated with the accounting cycle; financial statements for the sole-proprietorship, partnership and corporation; and foundations of managerial accounting.

Prerequisite(s): upper division standing and ACG 2001 and MAC 2233 are recommended. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 3320 - Law and Business

3 Credit Hours
(Fall, Spring)

An introduction to the legal setting in which modern business operates; emphasis is on public and regulatory law, basic contract law, the processes of administrative, statutory and common law and interstate commerce issues; includes an overview of the UCC and intellectual property.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4333 - Contract Formation and Administration

3 Credit Hours
(Fall, Spring)

Students will be exposed to the differences in the public and private sector contracting environments. Emphasis will be placed on the fundamentals of contract formation including sealed bidding, negotiations, and best value methods. Students will learn the fundamentals of contract administration including inspection and acceptance, quality control, contract changes, and disputes.

Prerequisite(s): upper division standing. Knowledge of basic computer and keyboarding skills are strongly recommended.

BUL 4931 - Acquisition Law Seminar

3 Credit Hours
(Spring)

This course addresses contract law as applicable to formation and administration of contracts with private and governmental agencies, with emphasis on the federal government. The following topics are also included: concepts of responsiveness and responsibility, bidding procedures, mistakes, negotiation procedures, changes, claims and dispute resolution. Students will explore the typical contracting problems that can lead to litigation.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

EDE 4223 - Integrating Art, Music, and Physical Education

3 Credit Hours
(Summer)

This integrative course provides students with critical understanding of art, music, and physical education. Emphasis is placed on the effective integrative lesson planning and modeling techniques to art, music, and physical education in elementary schools. This course requires a minimum grade of "C".

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4226C - Integrated Language Arts, Social Science and Literature

3 Credit Hours
(Fall, Spring)

This course is designed to prepare candidates to teach language arts and social science in elementary classrooms. Teacher candidates will develop units of study that integrate literature, language arts, with social science content. Emphasis is on constructivist principles and methodology. Teacher candidates will plan and deliver standards-based language arts and social science lessons designed to meet the needs of diverse learners including English language learners (ELLs) and students with exceptionalities. This course requires 18 hours of field experience in a K-6 classroom setting. Current background check (fingerprinting) acceptable to the district in which the field experience will take place is required for this course. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDE 4930C - Seminar in Elementary Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace. Includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3214 - Human Development and Learning

3 Credit Hours
(Summer)

This course is designed to cover the principles of learning and student development with applications to learning/teaching situations. Identification and analysis of students' academic, physical, cognitive, emotional, motivational, and social development is to be emphasized. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3430 - Measurement, Evaluation, and Assessment in Education

3 Credit Hours
(Fall, Spring)

This course studies the basic principles and methods of measurement, evaluation, and methods of test construction. Students will interpret standardized test scores, construct teacher-made tests and other classroom assessments, and evaluate portfolio and performance assessment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

EDF 3910A - Projects in Teacher Education

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of Teacher Education students completing an artifact required in the B.S.E. program. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

EDF 3910P - Projects in Teacher Education – Field Placement

1 Credit Hour
(Offered as needed)

Directed study and individual projects designed to meet the needs of Teacher Education students completing field experience in the B.S.E. program. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 3343 - Instructional Strategies

3 Credit Hours
(Fall, Spring)

This course provides an overview of instructional models and strategies. Emphasis is placed on principles of state standards, instructional methods, and lesson planning and instruction. Students will develop knowledge of instructional models and lesson plan construction for effective implementation including the diverse student

populations. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C

EDG 3410 - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring) Online Only

Practicing teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. This course is restricted to practicing teachers.

Prerequisite(s): upper division standing.

EDG 3410C - Classroom Management, School Safety, Law, and Ethics

3 Credit Hours
(Fall, Spring)

Pre-service teachers are provided strategies for managing a safe, stimulating learning environment for all learners. This course emphasizes school safety, law, and ethics as they apply to schools, districts, and the learning environment. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

EDG 4940 - Internship

9 Credit Hours
(Offered as needed)

Supervised teaching in a public or private school. Student teaching assignments will be made by the department of teacher education field placement coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing with permission of department chair.
EDE 4223, EDE 4226C, EDF 3214, EDF 3430, EDG 3410C, EDG 3343, EEX 3070, LAE 4343C, MAE 3350C, RED 3309C, RED 3511C, RED 4312, RED 4519C, SCE 3350C, TSL 3081C, TSL 4140C

EEC 3213 - Teaching the Language Arts In Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on the development of language and literacy in children ages birth through age four. Emphasis will be placed on understanding the process of emergent literacy including vocabulary and language, phonological awareness, print knowledge and comprehension; and on designing a developmentally appropriate

language arts program in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3227 - Art, Music, and Movement

3 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of the creative developmental process in the life of children from birth through four years old. Emphasis will be placed on the teacher's role in developing opportunities and materials for young children to express themselves creatively through music, drama, dance and two- and three-dimensional art and on providing varied opportunities for young children to gain an appreciation of art, music, drama, and dance in ways that reflect cultural diversity in relation to the early learning and developmental standards. This course will require observing and participating in an early childhood classroom.

EEC 3320 - Principles and Methods for Teaching Early Childhood Social Studies

3 Credit Hours
(Offered as needed)

This course is designed to prepare students to teach social studies In the early childhood classroom. Emphasis is on implementing the project approach to investigate components of social studies to include: individual development and identity; people, places, and environments, technology and our world; and civic ideals and practices. The student will increase and apply knowledge and skills in the Florida Early Learning and Developmental Standards relevant to this content area.

EEC 3511 - Curriculum for Infants and Toddlers

3 Credit Hours
(Offered as needed)

The focus of this course will be on the design, implementation and evaluation of programming and curriculum that promotes growth and development of young children birth to three years old and aligns with the early learning and developmental standards. Study of typical and atypical development will be included. Emphasis will be on working effectively with families of infants and toddlers.

EEC 3524 - Professionalism/Program Development

4 Credit Hours
(Offered as needed)

Focus of this course will be on management and leadership in early childhood education programs. Topics will include mentoring adults, professional development, staff assessment, program evaluation, and child advocacy. Career options in the field of early childhood education will be explored. This course will require observing and participating in a program or agency related to early childhood education.

EEC 4404 - Families and Diversity

3 Credit Hours
(Offered as needed)

This course will focus on building positive relationships with families through communication and involvement. Focus

will include developing an awareness of diversity and multicultural considerations in working with families of young children. The course will explore the role of the family and the influence of the community on the development of young children in a diverse society; and will prepare the student to work effectively with families and communities.

EEC 4421 - Teaching Math and Science in Early Childhood Education

4 Credit Hours
(Offered as needed)

The focus of this course will be on developing an understanding of how concepts, skills and attitudes in early childhood mathematics and science are developed in young children ages birth through age four. Math topics will include number sense and operations, patterns, geometry, and measurement. Science topics will include scientific inquiry, physical science, life science and earth science. Emphasis will be on the alignment of the Early Learning and Developmental Standards with a developmentally appropriate approach to teaching math and science in the early childhood classroom. This course will require observing and participating in an early childhood classroom.

EEC 4613 - Systematic Observation and Assessment

3 Credit Hours
(Offered as needed)

The focus of this course will be on understanding the purpose of child assessment, implementing developmentally appropriate practices in formal and informal child assessment, and using assessment results to support learning, to identify special needs, to evaluate programs, and to respond to program accountability requirements. A field experience is required to practice various methods of assessment in an early childhood setting.

EEX 3070 - Methods of Inclusion and Collaboration

3 Credit Hours
(Summer)

This course examines the basic identification techniques and strategies used to promote academic and social integration and interaction of "mainstreamed" exceptional students. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

❖This college credit course qualifies as having an international and/or diversity focus for Teacher Education Programs common prerequisites.

EEX 3604 - Classroom Management in Early Childhood Education

3 Credit Hours
(Offered as needed)

The focus of this course is on implementing effective classroom management practices including establishing an appropriate physical environment, setting up appropriate classroom routines and rules and creating a positive classroom community. Emphasis will be on strategies for guiding children's behavior, teaching social problem-solving skills and responding appropriately to challenging behaviors.

EEX 4201 - Young Children with Special Needs

3 Credit Hours
(Offered as needed)

The focus of this course will be on working with young children birth through age four in an inclusive early childhood classroom. Emphasis will be on identifying typical and atypical development, creating an inclusive early childhood learning environment, understanding special education law, developing an awareness of resources for inclusive practice to meet the needs of young children and their families.

EME 3410C - Integrating Technology in the Classroom

3 Credit Hours
(Fall, Spring)

In this course students will learn how to design a technology-rich classroom while contemplating the changing role of the teacher as a mentor/guide and student as a self-directed learner. Students will explore models of technology integration, classroom management, and administrative tasks that can be performed more efficiently using technology and learn strategies to select software and deal with legal and ethical issues when planning for technology integration. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3343 and EDG 3410C

ENV 4610 - Sustainable Logistics

3 Credit Hours
(Spring)

This course introduces students to current and future trends in logistics technology, policy and sustainability. Topics include, source sustainability, environmental impacts of existing and emerging technologies, and local environmental conditions and the global climate.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

ETI 4205 - Applied Logistics

3 Credit Hours
(Offered as Needed)

Introduction to logistics. Emphasis on practical applications. Includes systems engineering, cost/ systems effectiveness, reliability, maintainability, system functional analysis, logistic support analysis, life cycle cost analysis.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

EVR 3949 - Extended Internship, Environmental Science

4 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): Minimum Grade of "B" in any college-level science course and permission of instructor.

FIN 4402 - Financial and Economic Management

3 Credit Hours
(Fall, Spring)

This course addresses the application of contemporary theory and practice in business resource allocation. Topics include: capital budgeting, equity and capital financing, capital management, analysis of financial statements, pricing theory, management of working capital and other topics relevant to the acquisition, financing and management of business assets and business decision making. Both the economic and financial perspectives will be presented.

Prerequisite(s): upper division standing and ACG 3083 are required. ECO 2013, STA 2023, and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3031 - Contemporary Business Practices

3 Credit Hours
(Fall)

This course includes an orientation to and examination of opportunities and challenges facing managers in contemporary business organizations. Introduces the competencies of teamwork, communication, creative thinking, adapting to change, decision making and customer service through application to issues and problems across the general business spectrum.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3213 - Business and Administrative Communication

3 Credit Hours
(Fall)

A comprehensive course in effective and efficient communications in the business world; includes preparation of reports, proposals and presentations, technical writing skills, composition of standard business documents including persuasive messages, sales letters, customer service correspondence, instructional memoranda, and policy and procedure development.

Prerequisite(s): upper division standing and ENC 1101 or departmental permission are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3434 - Ethics for Business Leaders

3 Credit Hours
(Fall)

This course uses a case study approach to focus on the significant ethical and legal issues facing today's business leaders. The theoretical and philosophical background will be presented along with real-life examples of ethics in the workplace. Cases and readings will be used to develop both analysis and application skills in the following areas: corporate and personal decision making, organizational culture and reputation, social responsibility and social reporting, customer relations, employee relations, financial reporting, technology, privacy/confidentiality and communications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3444 - Business Trends and Issues

3 Credit Hours
(Fall)

This course builds on the traditional themes and concepts of the general business area through specialized readings on trends and issues facing today's business and industry leaders. Students will read opinion pieces by noted in-field experts, as well as conduct basic research on contemporary issues such as information and workplace security, diversity in the workplace, outsourcing functions/services and global competition, with an eye to improving business operations.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3930 - Business Project and Acquisitions Terms and Concepts

1 Credit Hour
(Fall)

Students will apply specialized terminology of project and acquisitions management in various communication venues including short written documents and summary analyses. Emphasis will be placed upon the latest terms, abbreviations and jargon applicable to the field. Students will research selected terms and concepts in various contemporary periodicals and publications.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 3933 - Business Research

1 Credit Hour
(Fall)

This seminar-style course, offered in group or individual format, provides an introduction to various references, databases, periodicals, journals and other publications essential to the research of contemporary business issues; also included are methods of accessing resources via the Internet, designing search strategies, citing Internet resources and evaluating research materials.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4454 - Business in a High Technology Environment

3 Credit Hours
(Spring)

Presents the special challenges and opportunities of managing a high technology firm or a traditional entity operating in the high technology environment; addresses software/information security, recruiting technical personnel, outsourcing, equipment security, updating equipment, telecommuting and similar issues.

Prerequisite(s): upper division standing and GEB 3031 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4930 - Special Topics: Project Management

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4933 - Special Topics: Management

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4934 - Special Topics: Business Administration

3 Credit Hours
(Offered as needed)

An individual or group course designed to provide students with the opportunity to pursue a special topic(s) from the area of business administration in depth; may be repeated as topics change.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

GEB 4941 - Internship: Business

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved

projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): upper division standing and permission of the instructor are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3110 - Health Care Organization and Management

3 Credit Hours
(Spring)

This course focuses on the structure and management of health care organizations, and the fundamental issues facing the U.S. health care system. Key topics include health status, the organization of health services, manpower, public health, financing, facilities, utilization, quality, regulation, and national health policy.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3111 - Introduction to Health Care Management

3 Credit Hours
(Fall)

This course studies the administration, organization and delivery of health care in the United States. Topics to be examined include health care leadership, management, strategy, performance improvement, information technology, insurance, financial and human resources management, as well as ethical and legal concepts.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 3113 - Contemporary Issues in Health Care

3 Credit Hours
(Spring)

This course is designed to introduce students to a range of issues related to health and health care in the United States. Course content will give students the opportunity to explore differing perspectives as they develop a deeper understanding of the issues and enhance their research and communication skills. The course will enable students to analyze and evaluate evidence regarding controversial issues. Students will develop and practice skills in formulating and writing well-informed, well-articulated arguments and reflections.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4191 - Health Information Systems

3 Credit Hours
(Fall)

This course focuses on the theories, concepts and principles of health information systems and development of critical thinking skills for use in practice/working in health care informatics. Current trends and issues in using, designing, and managing heath care information systems will be examined. Students, applying evidence-based knowledge, will analyze the design and implementation of health care information systems.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

HSA 4922 - Capstone: Health Care Management

3 Credit Hours
(Spring)

This course integrates the information, skills, and abilities provided throughout the Health Administration Program in a capstone project. Students complete a project that demonstrates excellence by applying the knowledge gained from the core courses and materials studied throughout the program. Successful completion of the course requires demonstration of the achievement of program objectives and learning outcomes.

Prerequisite(s): senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

HUS 4950 - Capstone: Human Resources Management

3 Credit Hours
(Spring)

This capstone will build upon and integrate the primary human resource management skills introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge in the field of human resources.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

ISC 4145 - Environmental Systems

3 Credit Hours
(Offered as needed)

Environmental Systems will expose students to a broad overview of the structure and processes occurring on Earth. Students will gain a broad understanding of the interactions between the atmosphere, biosphere, lithosphere, and hydrosphere. Course topics will be related to current environmental issues and our local ecosystems. This course is focused on Earth System Science content with development of methods specific to teaching middle school science as a secondary objective.

Prerequisite(s): (1) any two-course laboratory sequence in the natural sciences (i.e., Principles of Biology I & II, Principles of Geology I & II, College Chemistry I & II, Physics I & II, College Physics I & II, Anatomy & Physiology I & II); (2) any GLY course; (3) and either CHM1020 (Chemical Science) or PHY1020 (Physical Science).

ISM 3220 - Network Technologies for Information Professionals

3 Credit Hours
(Fall)

This course is designed to give the student an understanding of the various networking technologies and their practical application in the management of a business. The course also covers the technical issues involved in designing and implementing an efficient network for voice, data, and information networks.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3232 - Software Essentials

3 Credit Hours
(Fall)

This course covers a broad range of software topics as they apply to software management and systems analysis and design. Topics include, but are not limited to programming, the systems development life cycle (SDLC), systems management, interface design and Internet technology.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 3323 - Applications in Information Security

3 Credit Hours
(Spring)

This course helps develop the important security concepts relative to software application development and access control that provide the knowledge and skills necessary for the successful management of information security in an organization. Students will understand the environment where software is designed and developed as well as the critical role software plays in providing security to an organization's information systems. The course focuses on software development concepts that relate to security, and how access control methodologies fit into the entire enterprise architecture.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4011 - Information Systems Management

3 Credit Hours
(Spring)

This course provides a study of the language, concepts, structures, and processes involved in management of information systems, including the fundamentals of computer-based technology and the use of business-based software for support of managerial decisions.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4480 - Electronic Commerce Systems and Strategies

3 Credit Hours
(Offered as needed)

This course is designed to familiarize the student with the management approach to defining and implementing e-commerce (EC) systems. The course addresses the digital economy, EC strategy and marketing, EC models (Business to Business, Business to Consumer, etc.) as well as EC architectures. The course will cover management and regulatory issues in EC such as internationalization, electronic payment methods, Internet fraud, mobile e-commerce, and current implementation technologies. Architectures and inter-dependence (i.e. integration) of systems will be covered.

Prerequisite(s): upper division standing and at least two information technology or computer science courses at a college or university level.

ISM 4930 - Special Topics - Technology Management

3 Credit Hours
(Offered as needed)

This is an individual or group course designed to provide students with the opportunity to pursue a special topic(s) in depth; may be repeated as topics change.

Prerequisite(s): Upper division standing and permission of instructor.

This course may be taken up to two times for credit.

ISM 4931 - Internship - Technology Management

3 Credit Hours
(Offered as needed)

This is an individualized internship course that provides the student with supervised professional experience utilizing skills acquired in the program of study. The student will work with a qualified work site supervisor on approved projects related to his or her degree in a professional environment. The work site supervisor will evaluate the student's performance, and the student will submit report(s), examples of projects completed, or other assignments as required by the instructor, as appropriate, during the internship experience for evaluation by the college instructor. If this course is taken for credit more than once, the student must, on the second and subsequent (if applicable) enrollment(s), develop in concert with the work site supervisor and college instructor a unique set of objectives and assessments.

Prerequisite(s): upper division standing and permission of instructor.

LAE 4343C - Writing Across the Curriculum

3 Credit Hours
(Offered as needed)

This course prepares pre-service teachers by developing an understanding of the foundations of writing through the use of writers workshops and instructional strategies necessary to provide adequate instruction to emergent, novice, and transitional writers. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAD 3107 - Applied Discrete Mathematics

3 Credit Hours
(Fall)

This course builds on the foundation established in Introduction to Discrete Mathematics with further exploration in logic, mathematical reasoning, and mathematical proof writing. Topics include logic, set theory, boolean algebra, combinatorics, and graph theory with applications.

Prerequisite(s): Completion of MAC 2312 with a grade of “C” or better or concurrent enrollment in MAC 2312.

MAE 3350C - Principles and Methods for Teaching Mathematics K-8

3 Credit Hours
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in grades K-8. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4312C - How Children Learn Math

3 Credit Hours
(Offered as needed)

This course is designed to develop the skills and concepts necessary to deliver the mathematics curriculum effectively in the classroom. The content strongly reflects the curriculum emphases of the National Council of Teacher of Mathematics, and topics are presented using a process-oriented approach. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4930C - Seminar in Math Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in mathematics, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4940C - Teaching Methods in Middle Grades Math Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching mathematics in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

MAE 4945 - Internship - Middle Grades Math

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Math in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430 , EDG 3410C, EDG 3343, EEX 3070, EME 3410C, MAC 2312, MAD 3107, MAE 3350C , MAE 4312C, MAE 4940C , MHF 4404, MTG 2206, RED 3324C, RED 3335C, STA 2023, and TSL 3081C

MAN 3052 - Management Philosophy and Practice

3 Credit Hours
(Fall)

A comprehensive study of contrasting philosophies of management, current theories of leadership, management and supervision, as well as current trends and issues for business managers; focuses on applications and cases for development of competencies across all business functions and units; emphasis is placed on the cross-functional aspects of management, as well as the manager's need for a general business perspective.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3120 - Leadership and Group Dynamics

3 Credit Hours
(Spring)

An applied leadership course with a focus on case studies, projects and group interaction; includes theoretical background on group dynamics, small group behavior and motivation, power, types of groups, verbal and non-verbal communication skills and team-building. Emphasis will be placed on sociological and psychological dimensions of inter-group relations, including analysis and problem-solving through simulations, cases and similar activities which reflect a general business perspective, as well as leadership and group dynamics across a variety of business units/functions.

Prerequisite(s): upper division standing is required. Concurrent or prior enrollment in GEB 3031 and MAN 3052, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3240 - Organizational Behavior

3 Credit Hours
(Spring)

Designed to develop student understanding of individual, group and organizational issues that affect and shape businesses. Topics include motivation, communication, decision making, leadership, power, organizational structure, team performance, organization diversity and change management.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3294 - Strategy and Innovation

3 Credit Hours
(Offered as needed)

This course explores the concepts and tools used by businesses to create and sustain competitive advantage under dynamic market conditions. Topics will include strategy formulation, understanding core capabilities, examining external competitive forces and evaluating goals. Emphasis will also be placed on understanding the process of innovation and challenges faced by innovative organizations.

Prerequisite(s): Upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3310 - Issues in Human Resource Management

3 Credit Hours
(Fall)

Introduces the full range of human resource management functional areas, including recruiting and hiring staff, performance evaluations, employment regulations, discipline and termination, downsizing, compensation and benefits, job analysis, the organized labor setting, equity/diversity issues, and policy design. Approach will focus on current issues and applications.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3320 - Employee Staffing and Benefits

3 Credit Hours
(Fall)

An intermediate level course in employment staffing issues focusing on staffing patterns, organizational structures, job analysis and design, staffing efficiencies, employee assistance programs, staff projection models, and employee services.

Prerequisite(s): upper division standing and MAN 3310 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3350 - Training and Development

3 Credit Hours
(Fall)

Covers various staff training and development models, effective workshop techniques, designing and implementing company-wide training and development programs. Assessment of training needs, training and development as a benefit and setting development goals; students will design and conduct at least one workshop/training session for fellow students.

Prerequisite(s): upper division standing and GEB 3213 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3505 - Production Operations and Logistics Management

3 Credit Hours
(Spring)

This course examines the integration of production operations and logistics management and how this enables an organization to compete successfully in business. Special emphasis is placed on the relationships that exist between operations and the supply chain to include operations and supply chain strategies, business processes, project management, product design and development, and inventory management.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3574 - Acquisition Management

3 Credit Hours
(Spring)

Students will be exposed to the fundamentals of government acquisitions. This course provides conceptual material on government acquisitions, to include program planning, execution, and control. Students will be introduced to the elements of program risk and learn risk management techniques. The systems engineering process will be emphasized to include work breakdown structures, cost -- benefit analysis, and scheduling.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3583 - Project Management

3 Credit Hours
(Spring)

In this introductory Project Management course, students will be exposed to the fundamentals of general project

management. This course provides conceptual material on project management techniques appropriate in system/subsystems management. Topics include project management functions, project manager roles and responsibilities, the project life cycle, and conflict resolution. Emphasis will be placed on project oversight issues across the various business units and functions.

Prerequisite(s): upper division standing and GEB 3031 or MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3593 - Logistics and Supply Chain Management

3 Credit Hours
(Fall)

Logistics and Supply Chain Management provides an introduction to logistics concepts in both the business and government environment. The student will gain an appreciation of the various logistics missions encountered both in the business world and government acquisition and support programs. The key concept is that logistics is a process that adds value to the end product whether it is a commercial item for a customer or a system used by the government which must achieve a desired state of readiness through an established or acquired infrastructure. Emphasis will be placed on the challenges related to providing logistical support for procurement, manufacturing, and life cycle support. The course will focus on supply chain strategies, logistics information systems, order fulfillment, inventory, demand forecasting, and collaborative planning. In addition, the student will be introduced to transportation constraints, third party logistics (3PL), warehousing, materials handling, international logistics and facility planning.

Prerequisite(s): Upper division standing and MAN 3052 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3610 - Global Logistics Management

3 Credit Hours
(Offered as Needed)

Examines selected industrial relations systems of Western Europe, Asia and the Americas, with special emphasis on differences among systems and the reasons such differences exist. The industrial relations significance of the multinational enterprise and management problems associated with operations in diverse systems are analyzed.

Prerequisite(s): Upper division standing and MAN 3593 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3786 - Sustainable Enterprise Planning

3 Credit Hours
(Offered as Needed)

This course introduces students to assessment tools, design and construction considerations, and operating planning requirements for sustainable enterprises. Students will learn about the ecological and economic benefits of sustainability/green practices. Additionally, they will learn how product, process, and service decisions affect sustainable enterprise concepts. Today's enterprises focus on social and environmental challenges, marketing, supply chain decisions, recycling, reusing, reconditioning, and other product and service decisions in order to realize a competitive advantage. This course will focus on best practices, case studies, evolving trends, and experimental efforts regarding sustainable/green systems.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 3903 - Operations Research

3 Credit Hours
(Fall)

Operations Research is a science of modeling and optimization. It allows to model real-world problems by using mathematics, statistics and computers. It provides us the tools and theories to solve real-world problems by finding the optimal solutions to models subject to constraints of time, labor, resource, materials and business rules. With Operations Research, people make intelligent decisions to develop and manage their processes and businesses.

Prerequisite(s): Upper division standing is required. STA 2023, MAC 1140, and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4162 - Customer Relations for Managers

3 Credit Hours
(Offered as needed)

This course focuses on relationship building for all customers of an organization. The impact of culture and diversity on business relationships, successful negotiation strategies, and promotion of the organization through media relations are discussed. Emphasis is placed on the manager's role in improving customer relationships by creating a customer-focused, organizational climate.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4401 - Labor Relations

3 Credit Hours
(Offered as needed)

This course explores the impact of employee organizations on labor relations, current problems, conflicts and trends and includes the development of managerial approaches to achieve labor management cooperation.

Prerequisite(s): upper division standing is required and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4520 - Quality Management

3 Credit Hours
(Spring)

This course examines the significance of quality as a primary competitive strategy for tomorrow's successful business organizations. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations functions. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, field trips and outside speakers. The students are expected to gain insight and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management. This course is appropriate for students who have an interest in: (1) managing the total quality program in a business organization, and/or (2) working for a business organization which already made a

strong commitment to total quality management.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4555 - Quality Certification: ISO 9000

3 Credit Hours
(Fall)

A comprehensive study of internationally uniform quality standards (ISO 9000 and the steps to individual and organizational certification; includes management responsibility, quality system documentation, contract review, design control, process control, inspection and testing, corrective actions and other certification topics.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4570 - Purchasing and Materials Management

3 Credit Hours
(Fall)

The management of purchasing and the materials for production processes. Cost/price analysis, computer systems, forecasting, materials requirements, negotiations, and contracting are included.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4594 - Reverse Logistics

3 Credit Hours
(Offered as Needed)

In this course forward-moving logistics is compared to reverse-moving logistics. Both goods and information are discussed. Topics include federal and state regulations, waste management, recycled materials, technology, financial controls, stakeholders, and performance measurement.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4595 - Logistics Technology

3 Credit Hours
(Offered as Needed)

This course provides an overview of the use of technology (bar codes, gps, and radio frequency identification tags) in logistics to control recalls, returns, recycling, and waste management. Management functions, data synchronization, and interrelationships between different technologies to capture data regarding products moving in a logistics system are also discussed.

Prerequisite(s): Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4720 - Strategic Planning and Management

3 Credit Hours
(Spring)

This course addresses the integration of organizational functions to achieve competitive advantage and organizational harmony through strategy formulation, implementation and evaluation. Activities include case studies and a strategic planning simulation. Topics include change theory, decision-making, planning models, and strategic planning processes as applied in a variety of business settings, units, and functions.

Prerequisite(s): upper division standing and knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4930 - Capstone: Acquisition Management

3 Credit Hours
(Spring)

In this seminar, students will have the opportunity to participate in hands-on projects applying the techniques in MAN 3574 - Acquisition Management. Emphasis will be on government acquisition management. Students will create a work-breakdown structure, a project schedule, and perform a cost-benefit analysis of alternatives. Earned value management will be introduced as a method of program control. Students will also identify potential risk areas and suggest mitigation plans.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4931 - Capstone: Project Management

3 Credit Hours
(Spring)

This seminar will build on the basic project management skills by introducing the basic tools used by project managers. The student will learn management techniques for project planning, budgeting, scheduling and control techniques, cost estimating and project management software applications. Students will be exposed to the relationship of purchasing and contracting with project management.

Prerequisite(s): senior standing and completion of MAN 3583 are required. Concurrent enrollment in remaining program core and emphasis courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4932 - Contract Negotiations Seminar

3 Credit Hours
(Offered as needed)

This seminar will refine the negotiation skills of the student through the use of readings, class discussions, case analyses, and practical exercises. Students will be introduced to goals, objectives, and strategies, as well as using appropriate tactics and methods to achieve them. The course will also help students understand the role of communication, power, and personality in the negotiation process and facilitate them assessing their personal abilities and traits as they relate to negotiation. While the course will focus on negotiation of defense-related contracts, the principles covered will apply to the entire range of interpersonal relationships.

Prerequisite(s): upper division standing and BUL 4333 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4933 - Best-Value Source Selection Seminar

3 Credit Hours
(Offered as needed)

Focus is on the best-value source selection process. Students will walk through the acquisition cycle. Topics will include acquisition strategy, pre-solicitation activity, preparation for evaluation, initial proposal evaluation, discussions or negotiations, final proposal revision and recommendations and decisions.

Prerequisite(s): upper division standing and MAN 3574 are required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4934 - Logistics Management Seminar

3 Credit Hours
(Offered as needed)

A special topics course conducted in group or individual format; focus is on the terms, concepts and processes associated with logistics and distribution in the contemporary business environment.

Prerequisite(s): upper division standing and MAN 3583 or MAN 3574. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAN 4940 - Capstone: Supervision

3 Credit Hours
(Spring)

This capstone course will build upon and integrate the primary management skills and concepts introduced in prior emphasis courses. Students will have the opportunity to work on a hands-on project to demonstrate, apply, and develop their knowledge. This course will also cover basic entrepreneurial principles, which will be integrated throughout the student-led projects.

Prerequisite(s): Senior standing and completion of or concurrent enrollment in remaining core and emphasis business courses. Knowledge of basic computer and keyboarding skills are strongly recommended.

MAR 4333 - Marketing Strategy

3 Credit Hours
(Fall)

This upper-level marketing course is aimed at the marketing functions of a business, with emphasis on how strategies are developed and how the marketing mix is created to meet the wants and needs of consumers.

Prerequisite(s): Upper division standing required and knowledge of basic computer and keyboarding skills are strongly recommended.

MHF 4404 - History of Mathematics

3 Credit Hours
(Offered as needed)

This course is for students pursuing an education degree with an emphasis in middle school and secondary mathematics. This course covers the evolution of mathematics from early number systems through modern mathematics. If used to meet NWFSC Teacher Education program requirements, this course requires a grade of "C" or better.

Prerequisite(s): Completion of MAC 2311 with a grade of "C" or better or concurrent enrollment in MAC 2311.

MSL 3201 - Adaptive Team Leadership

3 Credit Hours
(Fall)

Examines skills that underlie effective problem solving, analyze military missions and plan military operations, execute squad battle drills.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3202 - Leadership in Changing Environments

3 Credit Hours
(Spring)

Probes leader responsibilities that foster an ethical command climate, develop cadet leadership competencies, and apply principles and techniques of effective written and oral communication.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 3203 - The Joint Environment

3 Credit Hours
(Offered as Needed)

Provides an introduction to the joint military environment. The course provides an overview of the development of national and regional policy through the national Security Council and national security system.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4301 - Developing Adaptive Leaders

3 Credit Hours
(Fall)

Discuss staff organization, functions, and processes, analyze counseling responsibilities and methods, and apply leadership and problem solving principles to a complex case study/simulation.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

MSL 4302 - Leadership in a Complex World

3 Credit Hours
(Spring)

Capstone course to explore topics relevant to second lieutenants entering the army, describe legal aspects of decision making and leadership, analyze army organization from tactical to strategic level.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

NSP 3640 - Nursing Care of Military and Veteran Populations

3 Credit Hours
(Spring)

This course is designed to identify the unique healthcare needs of military and veteran populations in the United States in order to prepare students and practicing nurses to develop competence in designing nursing interventions within civilian and government agencies in which military members and veterans seek healthcare. In accordance with the ANA's pledge (2012) to raise awareness of the unique conditions and needs of military veterans and their families, this course supports the Joining Forces initiative to further nursing training to include specialized topics such as traumatic brain injury, posttraumatic stress disorder, trauma rehabilitation, and understanding the military and veteran's healthcare delivery system.

NSP 4275 - Introduction to Critical Care Nursing

3 Credit Hours
(Offered as Needed)

This course examines the needs of the critically ill client. As part of the human experience, the integrity of the individual and family may be disrupted by a critical illness. During such time, the critical care nurse assists the individual and family to restore life processes to a state of dynamic equilibrium. This course emphasizes the involvement through use of scientific rationale and application of the nursing process in providing care to the individual client and family. Critical care concepts and skills for promoting client and family well-being are stressed.

NSP 4625C - Transcultural Nursing Immersion Course

3 Credit Hours
(Offered as needed)

This course unfolds in two phases: a comprehensive Orientation and Education Phase (I) and a Population Service Phase (II). The two stages are designed to be synergistic in nature. Phase I helps students to develop a deeper appreciation for an underserved region of the world. Phase I will set the stage for the immersion and learning that will take place during Phase II when students will provide basic healthcare and health education to an instructor chosen underserved population in the world. Air and ground travel are required. Current/valid Florida Registered Nursing License, good health, and a clear Background Check/Drug Screen are required. An International Passport may be required. Expenses associated with the course are the responsibility of the student.

Prerequisite(s): Student must be a Registered Nurse and have a clear background check/drug screen.

NSP 4869 - The Professional Nurse Manager and Leader

3 Credit Hours
(Offered as needed)

This course outlines the roles and functions of nurses in executive practice using the competencies identified by the American Organization of Nurse Executives (AONE). Successful nurse leaders and managers exercise complex leadership responsibilities that directly affect the quality of patient and family care in today's multifaceted healthcare management systems. This course will address competencies in communication, knowledge of the healthcare environment, business skills and principles, and professionalism. The course content also provides a review of the material covered in the Certified Nurse Manager and Leader examination conducted by the American Organization of Nurse Executives Credentialing Center that is available to BSN prepared Registered Nurses.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 3067C - Health Assessment

3 Credit Hours
(Fall, Summer)

This course is designed to develop the student's knowledge for obtaining and recording a systematic, comprehensive health history, psychosocial assessment, and physical examination of the adult. The course involves the synthesis of nursing, biologic, psychologic, and sociocultural knowledge and theories as they apply to the findings obtained in the comprehensive health assessment of clients of various ages. During the fieldwork experience, emphasis will be placed on collection of a database through physical assessment, history taking and interviewing.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3071 - Writing for Success in Nursing

1 Credit Hour
(Fall, Spring, Summer)

This course Is designed to develop the student's knowledge for writing at the upper division nursing level. The course includes information regarding use of APA format and scholarly writing resources.

Prerequisite(s): Student must be a Registered Nurse to take this course.

NUR 3080 - Dimensions of Baccalaureate Nursing Practice

3 Credit Hours
(Fall, Summer)

This course will provide Registered Nurses, who are returning to school to earn a Baccalaureate degree, an opportunity to advance professional practice concepts. As designed, the course engages the student intellectually in an ongoing professional dialogue and journey with peers, colleagues, and instructors that serves to broaden the student's professional development and builds on preexisting knowledge and experiences. The course curriculum is written for adult learners with the characteristics of self-direction, prior experience, applicability to practice, and motivation to meet the challenge to expand their knowledge base and to utilize advanced critical thinking skills.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 3678 - Nursing Care of Vulnerable Populations

3 Credit Hours
(Offered as needed)

Caring for the vulnerable members of society is a function nurses perform without regard for their own ambitions, personal safety, and financial security. This course is designed to pull together material from different cultures and at risk groups of individuals considered vulnerable populations. Key concepts will be discussed that will provide a basic structure for caring for the vulnerable, the relevance of nursing theories to vulnerable populations, nursing research showing the kinds of phenomena nurses study, and many ideas about learning to work with and advocate for vulnerable individuals.

NUR 3767 - Nursing Care of Complex Clients

3 Credit Hours
(Spring)

This course assists the RN to BSN student in the assimilation of pathophysiology, assessment, and pharmacological nursing concepts with variety complex client issues. This course provides expanded concepts related to nursing care for individuals experiencing complex alterations in health problems as they progress through a variety of healthcare delivery systems and environments.

Prerequisite(s): NUR 3067C, NUR 3080.

NUR 3826 - Nursing Ethics

3 Credit Hours
(Offered as needed)

This course provides an in-depth exploration of ethical principles and moral reasoning as the foundation of nursing practice. The ANA Code of Ethics will be used as a framework for examining current issues in healthcare delivery across the age span from reproductive issues to end-of-life care.

Prerequisite(s): Must be an RN or ASN student.

NUR 3837 - Health Care Issues

2 Credit Hours
(Fall, Spring)

This course provides a forum for the exploration and evaluation of concerns germane to contemporary nursing. The focus of this course is on the nursing profession and current major issues and problems that concern it. Social forces influencing changes in the nursing profession are analyzed in terms of historical antecedents and their current manifestations. Recently passed, and pending legislature at both the national and state levels is emphasized.

Prerequisite(s): Current RN Licensure.

NUR 3955 - Portfolio I

1 Credit Hour
(Fall, Summer)

This course will provide RN to BSN students an opportunity to develop an electronic professional portfolio to express one's professional nursing expertise and proficiency.

Prerequisite(s): Admission to the BSN program and meets all enrollment conditions.

NUR 4125 - Clinical Pathophysiology

3 Credit Hours
(Fall, Spring)

This course examines in detail the underlying process involved in the development, evolution, manifestations, and complications of common clinical diseases across the life span, and compares normal and abnormal states. The biological bases for therapeutic clinical actions are examined.

Prerequisite(s): NUR 3067C

NUR 4165 - Evidence-Based Practice: Incorporating Nursing Research

3 Credit Hours
(Fall, Spring)

This course is designed to provide the RN to BSN student with an introduction to the research process and evidence based practice. The purpose of the course is to stimulate interest in nursing research; to enable students to understand and judge the usefulness of scientific findings; and to develop an understanding of how clinical proficiency is combined with experimental proof to produce nursing practices based upon evidence. An on-line teaching method is used with optional workshops available to students.

Prerequisite(s): STA 2023.

NUR 4615C - Family and Community Health

5 Credit Hours
(Fall, Spring)

The Family and Community Health Nursing course is designed to facilitate the conceptualizing of family, population groups, and community as units of care from diverse cultures, ethnic, and social backgrounds. The student is provided a fieldwork opportunity to assess the health needs of selected families and groups in the community setting with selected health promotion, risk reduction, and disease prevention. The nursing process is used to examine multiple influences impacting life-course experiences of families and communities to enhance functioning.

Prerequisite(s): NUR 3067C, NUR 3080, admission to the BSN program and completion of all General Education requirements.

NUR 4827C - Nursing Leadership and Management

5 Credit Hours
(Spring, Summer)

This course provides students with an evidence-based study of leadership, collaboration, and coordination in healthcare settings. Students develop an evidence based paper to deal with key leadership and management issues related to professional goals. Nursing leadership and management fieldwork focuses on the roles and functions of the professional nurse in these roles. Issues associated with healthcare delivery are explored. Fieldwork provides an opportunity to plan, implement and evaluate a change in the practice of nursing.

Prerequisite(s): NUR 3080,NUR 4165, NUR 3067C, NUR 4615C.

NUR 4956 - Portfolio II

1 Credit Hour
(Spring, Summer)

This course will provide students an opportunity to complete and evaluate their electronic professional portfolio to express their professional nursing expertise and proficiency.

Prerequisite(s): NUR 3955, NUR 3080; Pre or Corequisite: NUR 4827C.

PAD 3003 - Public Service Operations

3 Credit Hours
(Offered as Needed)

An introduction to public administration and policy in America. This course is designed to provide undergraduate students a basic understanding and appreciation of the administration of the public sector. It is intended to provide an overview of public administration for students interested in public service and for students, who as good citizens, want an appreciation of the complexities of public management.

Prerequisite(s): upper division standing.

PAD 3393 - Advanced Emergency Management

3 Credit Hours
(Offered as needed)

This course examines functional demands that emergency managers should be aware of in crafting emergency management policies and programs. Students investigate how public policy choices impact emergency planning and the consequences of a disaster. It is designed to help the student develop an in-depth understanding of overall emergency management principles, practices, and standards in the local, national, and international environments.

Prerequisite(s): upper division standing.

PAD 3820 - Public Safety System Integration

3 Credit Hours
(Offered as needed)

This course compares and contrasts the various components of the public safety sector. The course examines the working relationship between public safety organizations and the effectiveness of the various service delivery models.

Prerequisite(s): upper division standing.

PAD 3874 - Community Relations

3 Credit Hours
(Offered as Needed)

This course will expose the student to community relations theory and practice within a broad range of public safety organizations. Students will understand why positive community perception of public safety is critical to funding and operational effectiveness. Students will explore the public safety responsibility in establishing business continuity both in preplanning and following a disaster. Each student will gain the insight and skills necessary to be effective in the community relations function of public safety administration.

PAD 3882 - Issues in Public Service Administration

3 Credit Hours
(Offered as Needed)

This course focuses on current issues and trends in the field of public service administration. The course is structured to introduce management and administrative topics in public service, examine the implications to the field, and reformulate recommendations. This course will begin developing skills in project design and presentation. This course will enhance critical thinking skills.

Prerequisite(s): upper division standing.

PAD 4878 - Capstone: Public Service

3 Credit Hours
(Offered as Needed)

This course provides an opportunity for the student to complete a professional project and apply information and skills studied in core and concentration program courses under the direction of the professor. Successful completion of the course requires demonstration of achievement of the program's learning outcomes. This course should be completed in the last term before graduation.

Prerequisite(s): upper division standing.

PAD 4933 - Special Topics in Public Administration

3 Credit Hours
(Offered as needed)

This is an individual or group course designed to provide students with the opportunity to pursue a special topic(s) from the area of public administration in depth; may be repeated as topics change.

Prerequisite(s): Upper division standing and permission of the instructor.

This course may be taken up to three times for credit.

QMB 3250 - Quantitative Methods for Business Decisions

3 Credit Hours
(Fall, Spring)

An examination of the quantitative methods used in business and economics, including methods of maximization and minimization objective functions, the analysis and use of statistic methods for planning, decision making, and forecasting.

Prerequisite(s): upper division standing is required and Knowledge of basic computer and keyboarding skills are strongly recommended.

RED 3309C - Early and Emergent Literacy K-2

3 Credit Hours
(Fall, Spring)

This course is designed to increase the understanding of early literacy development and the conditions which promote total literacy from birth through lower elementary grades. Language theory and current research are used to shape informed practices regarding literacy development. Connections are made among all aspects of literacy learning: reading, writing, listening, speaking and attitude development. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3324C - Teaching in the Middle Grades Curriculum

3 Credit Hours
(Fall, Spring)

This course presents theory and methodology for teaching reading at the middle school level with emphasis on strategies for vocabulary and comprehension, evaluating student progress in reading, and integrating reading and study skills into content area instruction across the middle school curriculum. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3335C - Teaching Reading in the Content Areas

3 Credit Hours
(Fall, Spring)

This course addresses strategies, materials, and skills for teaching reading in content areas. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3324C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 3511 - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/ literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a minimum grade of "C" or better and is restricted to practicing teachers.

Prerequisite(s): RED 3309C and upper division standing

Prereq/Corequisites: EDG 3410C, EDG 3343

RED 3511C - Intermediate Literacy 3-6: Reading and Thinking

3 Credit Hours
(Fall, Spring)

This course combines the theory and practice in the teaching of reading/literacy in the elementary intermediate grades. Procedures for meeting individual differences, differentiated instruction, selected use of materials, and classroom organizations will be examined. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4312 - Integration of Assessment into Classroom Reading

3 Credit Hours
(Summer)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on integrating assessments into the curriculum to strengthen instructional strategies and student success. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better.

Prerequisite(s): RED 3309C, RED 3511C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4519C - Diagnostic and Instructional Interventions in Reading

3 Credit Hours
(Fall, Spring)

This course introduces formal and informal methods and materials used to identify reading strengths and weaknesses of students. Emphasis is placed on diagnosis of reading problems, administration of assessments, evaluation of results and planning instructional interventions to remediate reading difficulties. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C and upperdivision standing

Prereq/Corequisites: EDG 3410C and EDG 3343

RED 4854C - Reading Field Experience

2 Credit Hours
(Fall, Spring)

This course provides application of knowledge of reading development to reading instruction. Emphasis is placed on increased reading proficiency for struggling students, including students with disabilities and students from diverse populations. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): RED 3309C, RED 3511C, RED 4312, RED 4519C, upper division standing with permission of department chair

SCE 3350C - Principles and Methods for Teaching Science K-8

3 Credit Hours
(Fall, Spring)

This course provides techniques, methods and materials of instruction for teaching science in grades K-8. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4930C - Seminar in Science Education

1 Credit Hour
(Fall, Spring)

This course is designed to prepare the pre-service teacher to transition into the workplace, and includes resume writing, professional dress and demeanor, interview techniques, refining professional portfolio, class discussion of issues common to teacher interns in science, and review strategies for certification exams. This course requires a grade of "C" or better.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4940C - Teaching Methods in Middle Grades Science Field Experience

1 Credit Hour
(Fall, Spring)

In this course, students will apply knowledge of teaching strategies, methods and materials for teaching science in a middle school classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

SCE 4945 - Internship - Middle Grades Science

9 Credit Hours
(Offered as needed)

Supervised teaching of Middle Grades Science in an assigned school. Student teaching assignments will be made by the Department of Teacher Education Field Placement Coordinator. This course requires a minimum grade of "C". Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): Upper division standing with permission of department chair.
EDF 3214, EDF 3430, EDG 3343, EDG 3410C, EME 3410C, EEX 3070, ESC 1000, EVR 3949, ISC 4145, MET 1010C, RED 3324C, RED 3335C, SCE 3350C, SCE 4940C, TSL 3081C, and CHM 1020 or PHY 1020

SPN 3036 - Spanish for Health Care Providers

3 Credit Hours
(Offered as needed)

Spanish for Health Care Providers is designed for individuals majoring in nursing or working in health-related areas. The course focuses on vocabulary needed for the healthcare workplace, with grammar taught as a task-based practical skill. Students will learn phrases used to complete health assessments which include conducting interviews, filling out forms, writing reports, and reading and understanding medical articles and brochures. Prevalent disease processes will be discussed as well as cultural practices that affect health care, specifically the health care of Spanish-speaking patients. This course does not fulfill any part of the Florida state language requirements.

TRA 3132 - Procurement Management

3 Credit Hours
(Offered as Needed)

Purchasing is required by all types of goods-producing & service-providing organizations in such sectors as manufacturing, agriculture, health care, & government. This professional business function tries to buy the right good or service at the right quality, in the right quantity, at the right time, at the right price, from the right source, with delivery at the right place.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

TRA 4203 - Principles of Logistics

3 Credit Hours
(Offered as Needed)

Overview of logistics function within a firm and in the context of integrated vertical systems. Topics include customer service, information flow, inventory control, materials management, order processing, packaging, physical distribution.

Prerequisite(s): Upper division standing is required. Knowledge of basic computer and keyboarding skills are strongly recommended.

TSL 3081 - TESOL Issues and Practices

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a minimum grade of "C." Neither field experience or a background check/fingerprinting are required for current teachers enrolled in this course.

Prerequisite(s): Upper division standing

Prereq/Corequisites: EDG 3410C, EDG 3343

TSL 3081C - TESOL Issues and Practice

3 Credit Hours
(Fall, Spring)

This course is designed to integrate the theories and principles of the Teaching of English to Speakers of Other Languages and applying them to classroom instruction. ESOL methodology and curriculum will be emphasized as they relate to current best practice in ESOL instruction. The student will increase and apply knowledge and skills in the Uniform Core Curriculum relevant to this content area. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

TSL 4140C - ESOL Methods, Curriculum and Assessment

3 Credit Hours
(Fall, Spring)

This course is designed to build on the candidate's knowledge of applied linguistics and cross cultural communication. Candidates will extend their understanding of the role of language and culture in the classroom. This course will prepare candidates for effective planning, instruction, and assessment of ELLs in the classroom. This course requires a grade of "C" or better. Current background check (fingerprinting) acceptable to the District in which the field experience will take place is required for this course.

Prerequisite(s): TSL 3081C and upper division standing

Prereq/Corequisites: EDG 3410C and EDG 3343

Vocational Courses

Vocational Courses

CJK 0001 - Introduction to Law Enforcement

12 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to law enforcement, the process for becoming a certified law enforcement officer, and the requirements of the academy program. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0012 - Legal

63 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to introduce the student to the criminal justice system, the chain-of-command system in law enforcement, Constitutional Law, Florida Statutes, and the Police Code of Ethics. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0013 - Interactions in a Diverse Community

42 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enhance student awareness and understanding of human diversity issues and to teach students skills to enable them to effectively interact with people of diverse backgrounds. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to

college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0014 - Interviewing and Report Writing

54 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to help the student learn vital communication skills including interviewing, note-taking, statement taking, and report writing. It also helps the student to develop survival skills, stress management skills, and problem solving skills utilizing the SECURE model. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0020 - Law Enforcement CMS Vehicle Operations

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply vehicle operations knowledge, principles and techniques to the police driving environment. This course includes classroom instruction and practical application on the driving range. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0031 - CMS First Aid for Criminal Justice Officers

48 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. This course is designed to prepare prospective police officers to apply first responder knowledge and techniques to medical emergency situations. This course includes classroom instruction and hands-on practical demonstration. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or the Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0040 - CMS Firearms

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement/Corrections Florida CMS Basic Recruit Academy. This course is designed to give the student basic skills and knowledge needed to safely operate a firearm, and shoot a handgun, and shotgun and/or rifle with a prescribed degree of accuracy. This course includes classroom instruction and firing range practice/qualification. This course is open only to students admitted to the Law Enforcement Florida CMS or Corrections Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0051 - Defensive Tactics

81 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare prospective officers to control subjects and defend themselves using appropriate defensive tactics in accordance with Florida State Statue, the United States Constitution, and case law. This course includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

*Vocational courses are not applicable to the A.A. or A.S. degree or to the College Credit Certificate without an approved articulation agreement. Vocational courses, offered in clock hours, are courses that can be used for the awarding of Career and Technical or Vocational Certificates. In addition, vocational courses may be articulated to college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0064 - Fundamentals of Patrol

36 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to understand Community Oriented Policing and how it is implemented as a problem solving model, and identify the SECURE problem solving model and its application in real life situations; understand officer safety issues, identify and avoid fatal errors, identify and manage stress, maintain mental and physical fitness; respond to a call, approach a suspect, make an arrest, transport a prisoner and process the prisoner at a detention facility; and understand how to direct traffic, how to enforce traffic citations, identify how to respond to alarms and conduct a building search, and search inventory and impound vehicles. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

CJK 0065 - Calls for Service

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to respond to calls for service, disturbances, people in distress and court orders. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0077 - Criminal Investigations

51 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond appropriately to a person or property crime victim, witness, and suspect; conduct a preliminary investigation on crimes against persons and crimes against property offenses; conduct a follow-up investigation to establish a suspect's identity and/or ascertain facts of the case; and, give testimony in different types of court proceedings. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0078 - Crime Scene to Courtroom

36 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to prepare the student to respond to a crime scene, protect and survey a crime scene, process a crime scene, dust for latent prints, and document a crime scene by sketching. This course includes classroom instruction and scenario-based training exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0084 - DUI Traffic Stops

33 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective DUI stops, including identifying a driver under the influence of alcohol and drugs, conducting field sobriety tests, and completing a DUI investigation. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0087 - Traffic Stops

30 Clock Hours
(Offered Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to the basic rules for conducting safe and effective traffic stops, including ethical consideration, safety considerations, citation and warning procedures, and dealing with abandoned vehicles. It includes classroom instruction and practical proficiency exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0088 - Traffic Crash Investigations

33 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It introduces the student to traffic crash investigations, laws pertaining to traffic crashes and procedures for responding to a traffic crash. It includes classroom instruction and practical exercises. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0092 - Critical Incidents

45 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS Basic Recruit Academy. It is designed to enable students to identify the crowd control procedures to safely and effectively disperse or control a large group of people; understand local emergency response plans; respond to a bomb threat, assesses the scene, search and evacuate a building or suspected bomb sight, identify Weapons of Mass Destruction and properly respond to a WMD incident. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0096A - Criminal Justice Physical Fitness I

31 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0096B - Criminal Justice Physical Fitness II

32 Clock Hours
(Fall, Spring, Summer)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to encourage students to improve their overall physical fitness, improve their score on the final fitness evaluation, and adopt a foundation for lifelong fitness. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy.

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CJK 0300 - Introduction to Corrections

33 Clock Hours
(Offered as needed)

This course introduces students to the legal and ethical responsibilities of a correctional officer. Legal terms and definitions are explained. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0305 - CJSTC Communications

42 Clock Hours
(Offered as needed)

This course covers the entire report writing process. Topics include interview and interrogation, interpersonal communication, and practical exercises. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0310 - Officer Safety

12 Clock Hours
(Offered as needed)

Correctional officer safety procedures are learned. Students will learn to identify potential hazards and learn how to safely respond. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0315 - Facility and Equipment

12 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for inspecting a correctional facility and equipment. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0320 - Intake and Release

18 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for admitting and releasing inmates in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0325 - Supervising in a Correctional Facility

42 Clock Hours
(Offered as needed)

Students learn the appropriate procedures for supervising inmates in a correctional facility. They also learn to detect crimes and rule violations in various correctional facility settings. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0330 - Supervising Special Populations

21 Clock Hours
(Offered as needed)

Students learn how to identify and supervise special population groups, such as threat groups, juveniles, elderly, and mentally ill inmates. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0335 - Responding to Incidents and Emergencies

18 Clock Hours
(Offered as needed)

Students learn how to identify and respond to situations involving escapes, riots, bomb threats, fires, and medical emergencies in a correctional facility. This course is open only to students admitted to the Correctional Officer Basic Recruit Academy.

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CJK 0340 - Corrections PSAV Physical Fitness

30 Clock Hours
(Offered as needed)

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CJK 0422 - Dart-Firing Stun Gun

9 Clock Hours
(Offered as needed)

This course is a component of the Law Enforcement Florida CMS and Correctional Officer Basic Recruit Academies. It is designed to prepare students in the proper use of the Dart Firing Stun in accordance with the Florida State Statutes, the United States Constitution, and case law. It includes classroom instruction and practical physical exercises and demonstrations. This course is open only to students admitted to the Law Enforcement Florida CMS Basic Recruit Academy or Correctional Officer Basic Recruit Academy.

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CJK 0780 - Cross-Over Law Enforcement to Corrections

16 Clock Hours
(Offered as needed)

This course is a component of the Corrections Cross-Over Basic Recruit Academy. This course is designed to enhance Law Enforcement recruits' awareness and understanding of corrections and to teach student skills which will enable them to cross-train into the corrections profession. This course includes classroom instruction. This course is open only to students who have successfully completed the Law Enforcement Basic Recruit Academy and passed the state certification examination for Law Enforcement.

Prerequisite(s): Law Enforcement Basic Recruit Training Program.

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DEA 0020 - Pre-Clinical Procedures Theory

60 Clock Hours
(Offered as needed)

This course is designed to provide an introduction to the dental assisting profession to include orientation to four handed dentistry and general dental office procedures including, but not limited to basic principles of disease prevention, patient data collection and assessment, and instrumentation. Emphasis is on adhering to safety guidelines as specified by OSHA.

Corequisite(s): DEA 0020L.

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DEA 0020L - Pre-Clinical Practice Lab

90 Clock Hours
(Offered as needed)

This is a comprehensive chair side competency based course. The course provides the skills practice necessary for dental assisting students entering four handed dentistry practice including but not limited to infection control, taking and recording vital signs, assisting with operative procedures, principles of preventive dentistry, instrument identification, and use and maintenance of equipment. Emphasis is on aseptic technique and clinical competency with procedures performed in a contemporary dental practice.

Corequisite(s): DEA 0020, DES 0103L.

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DEA 0130 - Oral Pathology

30 Clock Hours
(Offered as needed)

This course is a general study of the scientific and clinical concepts that include additional knowledge base necessary to the practice of dental assisting. Students will study the normal and abnormal conditions of the oral cavity such as dental caries prevention, the dental caries process and recognition of various common pathological conditions. Oral pathology, histology and embryology are included. Emphasis is on the interrelationship of the information presented with the clinical practice of dental assisting.

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DEA 0803L - Clinical Practice I

150 Clock Hours
(Offered as needed)

This competency based clinical course provides a real world setting in which to integrate the laboratory and clinical skills learned in the classroom. The student receives closely supervised hands on training in chair side dental assisting through rotations at community dental offices. Progress is evaluated using predetermined competency guidelines. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 90 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Corequisite(s): DEA 0020, DEA 0020L.

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DEA 0851L - Clinical Practice III

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice II, providing a real world setting for students to practice the training and clinical skills learned in class including x-ray film placement and cone positioning. The student is assigned to various offices in the community including specialty offices and general dentistry offices. Students assist the dentist and staff with various function of a Dental Assistant at a more advanced level of proficiency. Students must provide their own transportation and must have current CPR training along with up-to-date immunizations. Specific procedure requirements and 180 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DEA 0852L, DES 0205, DES 0205L.

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DEA 0852L - Clinical Practice II

180 Clock Hours
(Offered as needed)

This course is a continuation of Clinical Practice I. It provides a real world setting for students to receive additional training in the clinical skills learned in class. Students are assigned to various offices in the community including but

not limited to general dentists, oral surgeons, orthodontists, periodontists, and endodontists. Performance evaluations are utilized to measure competency and provide feedback from the local dental offices to the instructor regarding the students' competency level. Skills are strengthened in Seminar Lab. Students must provide their own transportation, current CPR training, and up-to-date immunization records. Specific procedure requirements and 150 clinical rotation hours (minimum) must be fulfilled to successfully complete this course.

Prerequisite(s): DEA 0803L, DES 0400

Corequisite(s): DES 0830, DES 0830L.

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DEA 0936 - Dental Assisting Seminar

60 Clock Hours
(Offered as needed)

This course is designed to provide a review of materials commonly covered on the Dental Assisting National Board (DANB) Exam. Topics include but are not limited to infection control, general chair side procedures, and radiographic technique. The seminar will provide a mock board examination, and opportunities for review, problem solving, and strengthening skills. The course also serves as an opportunity for feedback from students' Clinical Practice.

Prerequisite(s): DEA 0852L, DEA 0803L, DES 0205, DES 0205L

Corequisite(s): DEA 0803L, DES 0206L.

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DES 0103 - Dental Materials

60 Clock Hours
(Offered as needed)

This course is a comprehensive study of the theory of manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. The competency based lab that accompanies this course includes exercises to illustrate application and use of selected materials. Students will study various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, as well as acrylic plastics. Students will become familiar with various pieces of dental laboratory equipment and their uses.

Corequisite(s): DES 0103L, DEA 0020L.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

DES 0103L - Dental Materials Lab

90 Clock Hours
(Offered as needed)

This course is a comprehensive study of the manipulation, physical and chemical properties of materials used in the diagnosis, prevention and treatment of oral disease. Emphasis is on practical application as it relates to the role of the dental assistant in the contemporary dental practice. It is a competency based lab that accompanies the theory course and includes exercises to illustrate application and uses of selected materials. Students practice the use of various materials including but not limited to impression materials, waxes, filled and unfilled resins, dental amalgams, gypsum, and acrylic plastics.

Corequisite(s): DES 0103, DEA 0020L.

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DES 0205 - Dental Radiology Lecture

60 Clock Hours
(Offered as needed)

This course is designed to introduce the theory, application and principles of radiographic exposure and processing techniques used in dentistry. Students will receive instruction including but not limited to historical data, radiation safety, exposure, processing, mounting and error prevention. Image interpretation of radiographic anatomical structures will be included.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205L.

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DES 0205L - Dental Radiology Laboratory I

60 Clock Hours
(Offered as needed)

This laboratory course assists students in radiographic performance techniques using DXTR manikins to achieve competency prior to exposure of various patients with varied dentitions. Students practice exposing, mounting, radiographic interpretation, safe darkroom procedures, identification of landmarks and distinguishing radiographic pathology from normal landmarks. Clinical radiographic skills necessary to produce diagnostic quality radiographs including bitewings, periapical radiographs, and panoramic x-rays will be covered. Emphasis is on patient and

operator safety guidelines and producing diagnostic quality radiographs.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L

Corequisite(s): DES 0205.

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DES 0206L - Dental Radiology Laboratory II

60 Clock Hours
(Offered as needed)

This laboratory course assists students in additional radiographic performance techniques to include surveys on patients with varied dentitions. Students practice more advanced radiographic exposure techniques, interpretation, additional darkroom procedures, identification of landmarks and distinguishing various radiographic pathology. Clinical radiographic skills necessary to produce diagnostic quality x-rays including but not limited to bitewings, periapical radiographs, and panoramic surveys on actual patients will be covered. Emphasis is placed on patient and operator safety guidelines and producing diagnostic quality radiographs during this course.

Prerequisite(s): DES 0400, DEA 0020, DEA 0020L, DES 0205L

Corequisite(s): DEA 0851L.

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DES 0324 - Interpersonal Communications Skills

30 Clock Hours
(Offered as needed)

This course is designed to implement interpersonal and effective communication skills in the practice of dentistry. It includes team building strategies, oral and written communications skills with the correct use of terminology commonly used in dentistry. Professionalism in verbal and nonverbal communications is emphasized. Students will be introduced to the legal and ethical scope of responsibilities for dental assistants and interpersonal relations in the dental office. Providing oral health instructions and post operative instructions for patients will be introduced. Scenario-based role playing is used to augment student learning of course content.

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DES 0400 - Dental Anatomy

90 Clock Hours
(Offered as needed)

This course provides a detailed study of the orofacial and related structures of the head and neck including, but not limited to the eruption, identification and function of the human dentition, study of bony, circulatory, muscular and nervous systems of the head, neck and surrounding structures associated with the oral cavity. A brief introduction to oral histology and embryology will be included.

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DES 0501 - Dental Practice Management

60 Clock Hours
(Offered as needed)

This course includes theory and content relating to practical administrative duties performed in the dental office. Lectures and role playing activities are related to the responsibilities of the dental assistant. Topics include but are not limited to appointment scheduling, billing, collections, record keeping, clerical and dental supply inventory. Students are introduced to the use of dental practice software with hands on computer experience. Legal responsibilities, interpersonal relations, and interview skills are included.

Prerequisite(s): DES 0205, DES 0205L

Corequisite(s): DEA 0936.

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DES 0602 - Pharmacology and Dental Office Emergencies

30 Clock Hours
(Offered as needed)

This course is designed to familiarize the dental assisting student with the basic concepts and considerations regarding pharmacology and pharmaceutics used in dentistry. Topics presented include nitrous oxide monitoring, emergency procedures and protocol. Lectures will include recognition of emergency conditions in the dental office, not limited to syncope, anaphylaxis, and cardiovascular incidents. Emphasis is placed on the role of the dental assistant in the prevention and management of dental office emergencies.

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DES 0830 - Expanded Function Theory

30 Clock Hours
(Offered as needed)

This course introduces the dental assisting student to the dental specialty practices and more advanced clinical skills. It also provides the theory of dental specialty practice administration as it relates to the role of the dental assistant including ethical and legal ramifications. Lectures relate topics including but not limited to dental specialty procedures, instruments used in the specialty practices and duties delegated to dental assistants according to the rules and regulations of the Florida Dental Practice Act. Role playing and problem solving activities using case studies relate to duties delegated to dental assistants.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830L.

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DES 0830L - Expanded Functions Lab

60 Clock Hours
(Offered as needed)

This laboratory course accompanies the clinical practice lecture course DES 0830 and provides opportunity for students to practice application of the duties delegated to dental assistants according to the Florida Dental Practice Act. Students become more proficient in more advanced skills. Competencies containing information and behavioral objectives allow students to master each skill before advancing to the next.

Prerequisite(s): DEA 0020, DEA 0020L, DES 0400

Corequisite(s): DES 0830.

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DES 0844 - Infection Control for Dental Assistants

30 Clock Hours
(Offered as needed)

This course is a general study in biomedical sciences of preventive dentistry to familiarize the dental assisting student with basic principles of microbiology, basic body structures, and their functions and effects as manifested in the oral cavity. The course also covers the effects of nutrition and the role of microorganisms in dental health and blood borne pathogens.

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college credit and applied to college credit certificates or A.S. degree programs. Students should work closely with an advisor to plan their studies in a way to take advantage of this opportunity.

EMS 0119 - Emergency Medical Technician for Firefighters

140 Clock Hours
(Fall, Spring, Summer)

Emergency Medical Technician is designed to prepare the student with the necessary fundamental knowledge to be successful in meeting Emergency Medical Technician certification and licensing requirements. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director

Corequisite(s): FFP 0010, FFP 0020, EMS 0119L

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EMS 0119L - Emergency Medical Technician Lab for Firefighters

160 Clock Hours
(Fall, Spring, Summer)

This course provides an integrated experience that is designed to allow the student to apply practical experience to material learned in Emergency Medical Technician. Students will learn how to assess, treat and transport the sick and injured at the level of the Emergency Medical Technician-Basic in the laboratory environment, area hospitals and advanced life support EMS ambulances. There is emphasis on assessment based learning and complies with National DOT EMT-Basic curriculum.

Prerequisite(s): Permission of the EMS Director.

Corequisite(s): FFP 0010, FFP 0020, EMS 0119

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FFP 0010 - Firefighting I

206 Clock Hours
(Offered as needed)

This course is the first part of the Basic Fire Recruit Academy and prepares students for a career as a volunteer firefighter. Classroom instruction includes a variety of fire related topics which are reinforced and enhanced through practical skills activities. Upon completion, the student is eligible to test for certification as a volunteer firefighter

through the Florida State Fire College and may elect to continue training in Firefighter II to pursue state certification as a career firefighter. Permission of the Public Safety Division is required.

Corequisite(s): FFP 0077 unless previous certification has been obtained for first responder, EMT, or paramedic.

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FFP 0020 - Firefighting II

192 Clock Hours
(Offered as needed)

This course is the second part of the Basic Fire Recruit Academy and prepares students for a career as a firefighter. The delivery of instruction includes a variety of training in practical skills necessary for the mastery of the basic competencies required in the program. Upon successful completion of this course, the student is eligible to take the Bureau of Fire Standards and Training written and practical examination. Permission of the Public Safety Division is required.

Prerequisite(s): FFP 0010 or FFP 0077

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FFP 0077 - First Responder for Public Safety Personnel

45 Clock Hours
(Fall, Spring, Summer)

This course trains public safety members who are the first to arrive at an emergency in providing efficient and accurate pre-hospital care. Students assess patients for wounds to determine if trauma, shock, burns or closed airways are a problem and how to address those issues by dressing wounds, stabilizing the person or administering oxygen. They immobilize patients and address common emergency medical issues with basic treatments. This course includes hands-on, practical experience and is necessary to be eligible for first responder certification.

This course is a co-requisite course for students entering the Firefighting Certificate program who do not have certification for first responder, EMT, or paramedic.
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PMT 0106C - Welder Helper

150 Clock Hours
(Fall, Spring)

This course provides instruction in shop safety, the use of safety procedures and protective equipment needed in a welding shop. Course incudes basic shop math, shop safety, welding equipment setup/teardown procedures.

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PMT 0111C - Metal Preparation

150 Clock Hours
(Fall, Summer)

This course provides instruction in different metal preparation processes including: thermal preparation (oxygen/fuel cutting, carbon arc cutting, plasma torch cutting). The student will also learn mechanical preparation (band saw, grinder, power brush, and other metal prep equipment).

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PMT 0121C - Introductory Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides instruction and demonstration using Shielded Metal Arc Welding (SMAW). Topics include visually inspect of welds, and basic SMAW technical terminology. Basic structural welding techniques will be demonstrated in accordance with American Welding Society (AWS) D1.1 Structural Welding Code. Tack welding and metal joint fit of carbon steel is covered in this course.

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PMT 0122C - Basic Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course introduces structural fillet welds in different joint positions in accordance with AWS D1.1 Structural Welding Code. Fillet welds will be performed on carbon steel plate of various thicknesses.

Prerequisite(s): PMT 0121C

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PMT 0126C - Intermediate Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Fall, Spring)

This course provides the student with instruction on joint design, joint preparation, and fit-up, and performance of groove welds with backing. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds with backing and make acceptable groove welds with backing using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0122C

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PMT 0127C - Advanced Shielded Metal Arc Welding (SMAW)

75 Clock Hours
(Spring, Summer)

This course provides the student with advanced instruction on joint design, joint preparation, and fit-up, and performance of open groove welds. Emphasis is placed on safe operation of welding equipment. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of open groove welds and make acceptable open groove welds in all positions using Shielded Metal Arc Welding (SMAW) in accordance with AWS D1.1 welding code.

Prerequisite(s): PMT 0126C

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PMT 0134C - Gas Metal Arc Welding (GMAW)

50 Clock Hours
(Spring, Summer)

This course provides instruction and demonstration using the various transfer methods and techniques of Gas Metal Arc Welding (GMAW). Topics included are safety, equipment set-up, joint design and preparation, and gases.

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PMT 0145C - Flux-Core Arc Welding (FCAW)

240 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Flux-Core Arc Welding (FCAW) and basic understanding of pipe welding. Welding symbols and blueprint reading are covered in this course.

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PMT 0155C - Gas Tungsten Arc Welding (GTAW)

160 Clock Hours
(Offered as Needed)

This course provides instruction and demonstration using the various transfer methods and techniques to gas tungsten arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases. Students study basic Gas Tungsten Arc Welding (GTAW), and basic understanding of pipe welding.

PMT 0165C - Shielded Metal Arc Weld (SMAW) Pipe Welding

200 Clock Hours
(Offered as needed)

This course introduces the student to the practices and procedures of welding carbon steel pipe using the Shielded Metal Arc Weld (SMAW) process. Emphasis is placed on pipe positions, electrode selection, joint geometry, joint preparation and fit-up. Upon completion, students should be able to demonstrate pipe positions, proper electrodes selection, proper joint geometry, joint preparation, fit-up, and proper SMAW pipe welding techniques in accordance with applicable codes.

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PMT 0171C - SMAW-GTAW Pipe Welding

400 Clock Hours
(Offered as needed)

This course is designed to provide the students with skills in welding carbon steel pipe using Shielded Metal Arc Weld

process and Gas Tungsten Arc Weld (GTAW) processes using proper filler metals in the 2G, 5G, and 6G positions. Upon completion, students should be able to perform shielded metal arc welding process and gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in the 2G, 5G, and 6G position in accordance with the applicable code.

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PMT 0173C - Specialty Pipe Welding

150 Clock Hours
(Offered as needed)

This courses covers advanced pipe welding and is designed to build advanced GTAW skills. This course covers advanced Gas Tungsten Arc Welding (GTAW) on alloy pipe and heavy wall carbon pipe.

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TRA 0080 - Tractor Trailer Truck Driver

320 Clock Hours
(Spring)

This course prepares students for entry into the trucking and logistics industry. Students explore career opportunities and requirements of a professional tractor trailer driver. Students study vehicle safety, accident prevention, operating regulations, cargo handling, documentation procedures, pre-trip preparation, vehicle inspection, maintenance, service, control procedures, backing, coupling, uncoupling, maneuvering, road and hazardous driving skills, and licensing requirements.

TRA 0086 - Tractor Operator

150 Clock Hours
(Fall)

This course is designed to build on the skills and knowledge students learned in the Heavy Equipment Maintenance Technician course for entry into the Heavy Equipment Operations industry. Content emphasizes beginning skills and concepts as a recommended requisite. Students study pneumatic and crawler-type tractor operations.

TRA 0650 - Natural Gas Distribution I

75 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance.

TRA 0650B - Natural Gas Distribution IB

75 Clock Hours
(Fall)

This course is prepares students for work as general technicians in the natural gas distribution industry. Students learn to comply with safety procedures, operate basic tools and equipment and provide customer assistance. This course continues the knowledge acquired in the TRA0650.

TRA 0651 - Natural Gas Distribution II

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.

Prerequisite(s): TRA 0650

TRA 0652 - Natural Gas Distribution III

150 Clock Hours
(Fall)

This course prepares students for work as general technicians in the natural gas distribution industry. Students complete customer compliance orders and assist in inspections. Content includes construction mathematics and reading.